

century; Germain, Lovelace, and Kovalevskaya the 19th. Eighteen of the women were alive at the turn of the century; the remainder were born after 1900. In the interest of achieving a certain historical perspective, only those born before 1925 or now deceased are included. All are American or European.

Jeanne LaDuke's introduction stresses the preliminary and provocative nature of the compilation: "It suggests questions rather than themes, issues rather than syntheses." Alice Schafer's foreword lists some of these questions. The essays themselves suggest other historical issues worth pursuing. They include the experience of women mathematicians in the scholarly emigration of the 1930s, changes in the life of science wrought by World War II, the extent and import of collaborative work in mathematics, funding for mathematical research, and the growth of such fields as applied mathematics, computer science, and mathematical logic.

With its thoughtful essays (which range from the depressing to the inspiring), bibliographies, and summary of sources of biographical information, the volume should prove useful both as a reference work and as a stimulus for further investigations of the history of women in mathematics. The volume is attractively designed and features a sturdy library binding and alkali paper.

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## Some Other Books of Interest

**The Latest on the Best.** Essays on Evolution and Optimality. JOHN DUPRÉ, Ed. MIT Press, Cambridge, MA, 1987. xiv, 359 pp., illus. \$27.50. A Bradford Book. Based on a symposium, Stanford, CA, April 1985.

The Conference on Evolution and Information held at Stanford University, from which this volume is derived, brought together representatives of the disciplines of biology, anthropology, psychology, and economics to consider issues of the relation between natural selection and adaptation (or optimization). In part 1 of the volume, methodological issues are taken up in contributions by P. J. Richerson and R. Boyd (on cultural evolution), John Beatty, and Philip Kitcher. Part 2 consists of papers by and an exchange between Elliot Sober and John Maynard Smith having to do with the modeling of evolution and an essay by Richard C. Lewontin the intent of which is "not to refute optimality theory but to demand its nontrivial formulation." In part 3, John M.

Emlen and John E. R. Staddon examine the optimality approach as applied in evolutionary ecology and in comparative psychology, respectively. Part 4 is devoted to applications of optimality considerations to human behavior, with contributions by Eric Alden Smith on ecological anthropology, Roger N. Shepard on cognition, Leda Cosmides and John Tooby on behavioral evolution, Jack Hirshleifer on the utility of emotional responses, and John Dupré on the generalizability of optimality theory to cultural phenomena. The volume includes an introduction in which Dupré provides an interpretative summary of its contents, as well as name and subject indexes.—K.L.

**The Psychology of Women.** Ongoing Debates. MARY ROTH WALSH, Ed. Yale University Press, New Haven, CT, 1987. xiv, 484 pp. \$40; paper, \$12.95.

This volume presents its subject in the form of essays reprinted from various sources to serve as expositions of "yes" and "no" answers to a series of questions about women chosen by the editor. The volume opens with a historical introduction by Walsh, who also provides a brief exposition of each question, with suggestions for further reading. Part 1 of the text considers issues of psychoanalytic theory: whether it is relevant to women (S. Chehrizi; H. Lerman) and whether women are masochistic (N. Shainess; P. J. Caplan). Part 2 deals with questions pertaining to psychological health: whether women are more likely than men to be mentally ill (W. R. Gove; M. Johnson), whether menstruating women are "at the mercy of raging hormones" (K. Dalton; R. D. Koeske), and whether menopause is a deficiency disease (P. W. Budoff; J. B. McKinlay and S. M. McKinlay). In part 3, under the rubric "new theories and evidence," are discussions of whether women fear success (M. S. Horner; M. A. Paduli), "Is androgyny a solution?" (S. L. Bem in two essays), whether "mothering behavior" contributes to the devaluation of women (N. Chodorow; A. S. Rossi), and whether women "speak in a different moral voice" (C. Gilligan; A. Colby and W. Damon). The remainder of the book is devoted to "social issues": whether sex differences in mathematics achievement are biologically grounded (C. P. Benbow and J. Stanley; J. S. Eccles and J. E. Jacobs), whether mothers should stay home with young children (B. L. White; J. C. O'Connell), whether abortion causes psychological harm to women (J. D. Osofsky and H. J. Osofsky; K. M. Lodl, A. McGettigan, and J. Bucy), whether lesbianism is a sickness (N. Gartrell; C. W. Socarides), and whether pornography is harmful

to women (R. Green; N. M. Malamuth). Except in the case of the last three questions the "yes" answers are placed first. The answer essays range in length from about 5 to over 40 pages. Research findings are cited and discussed, but it is recognized that many of the questions and their answers have ideological components and are not simply matters of empirical verification. The volume includes name and subject indexes.—K.L.

**Advances in Physiological Research.** H. McLENNAN, J. R. LEDSOME, C. H. S. MCINTOSH, and D. R. JONES, Eds. Plenum, New York, 1987. x, 505 pp., illus. \$89.50. Based on a congress, Vancouver, B.C., June 1986.

The present volume consists of a selection of review lectures from the 30th congress of the International Union of Physiological Sciences. Opening the volume are five historical papers, dealing with the development of physiology in British Columbia, the lives of Michael Sarrazin ("the father of Canadian physiology") and Walter B. Cannon, research on central nervous system synapses since the time of Charles S. Sherrington, and controversies over the Gaskell effect. Among the more general of the 21 papers that follow are a lecture entitled "Fads and fallacies in contemporary physiology" by Ernst Florey and the August Krogh lecture, an account by the late Kjell Johansen of his own research on the environmental physiology of organisms ranging from cephalopods to giraffes. Erik Torebjörk, in the Adrian-Zotterman lecture, describes experiments bearing on the validity of the pattern theory of cutaneous sensation, and J. Szentágothai discusses the architecture of neural centers. Topics of remaining papers include the generation of rhythmic movements, the computational study of vision, muscle mechanics and energy metabolism, thyroid hormones and the evolution of endothermy, diving in ducks, and water-salt homeostasis. The volume, printed from typescript, includes an index.—K.L.

## Books Received

**Advances in Epileptology.** 16th Epilepsy International Symposium (Hamburg, Sept. 1985). Peter Wolf *et al.*, Eds. Raven, New York, 1987. xxviii, 787 pp., illus. \$166.

**Advances in Local Area Networks.** Karl Kümerle, Fouad A. Tobagi, and John O. Limb, Eds. Institute of Electrical and Electronics Engineers, New York, 1987. xii, 604 pp., illus. \$ 56.50. Frontiers in Communications.

**AIDS.** Acquired Immune Deficiency Syndrome and Other Manifestations of HIV Infection. Gary P. Wormser, Ed. Noyes, Park Ridge, NJ, 1987. xlv, 1103 pp., illus. \$98.

**Alcohol and Addictive Behavior.** P. Clayton Rivers, Ed. University of Nebraska Press, Lincoln, NE,

1987. xx, 346 pp. \$29.95; paper, \$15.95. Nebraska Symposium on Motivation, 1986. Current Theory and Research in Motivation, vol. 34.

**Arctic and Alpine Mycology II.** Gary A. Laursen, Joseph F. Ammirati, and Scott A. Redhead, Eds. Plenum, New York, 1987. x, 364 pp., illus. \$65. Environmental Science Research, vol. 34. From a symposium, Fetan, Switzerland, Aug.-Sept. 1984.

**Atlas of U.S. Cancer Mortality Among Whites: 1950-1980.** Linda Williams Pickle *et al.* National Institutes of Health, Bethesda, MD, 1987 (available from the Superintendent of Documents, Washington, DC). iv, 184 pp., illus. \$24.

**Atmospheric Pollution.** E. E. Pickett, Ed. Hemisphere (Harper and Row), New York, 1987. xvi, 285 pp., illus. \$62.50. Proceedings of the Arab School on Science and Technology. From a conference, Zabadani, Syria, Aug. 1985.

**BCPL and C.** Glyn Emery. Blackwell Scientific, Palo Alto, CA, 1987. 173 pp., illus. \$45; paper, \$16.95. Computer Science Texts.

**Beyond the Roaring Forties.** New Zealand's Subantarctic Islands. Conon Fraser. Government Printing Office, Wellington, N.Z., 1986 (U.S. distributor, University of Washington Press, Seattle). x, 214 pp., illus. \$45.

**Bioluminated Deposits.** Gisela Gerdes and Wolfgang E. Krumbein. Springer-Verlag, New York, 1987. x, 183 pp., illus. Paper, \$24. Lecture Notes in Earth Sciences, vol. 9.

**Conodonts.** Investigative Techniques and Applications. Ronald L. Austin, Ed. Horwood, Chichester, England, 1987 (U.S. distributor, Wiley, New York). 422 pp., illus. \$89.95. British Micropalaeontological Society Series. Based on a symposium, Nottingham, U.K., July 1985.

**Constructive Philosophy.** Paul Lorenzen. University of Massachusetts Press, Amherst, MA, 1987. x, 291 pp., illus. \$30. Translated from the German by Karl Richard Pavlovic.

**Consumer Choice in Historical Archaeology.** Suzanne M. Spencer-Wood, Ed. Plenum, New York, 1987. xviii, 418 pp., illus. \$39.50.

**Coon Mountain Controversies.** Meteor Impact and the Development of Impact Theory. William Graves Hoyt. University of Arizona Press, Tucson, AZ, 1987. xii, 442 pp. + plates. \$40.

**Coping with Negative Life Events.** Clinical and Social Psychological Perspectives. C. R. Snyder and Carol E. Ford, Eds. Plenum, New York, 1987. xvi, 420 pp., illus. \$42.50. Plenum Series on Stress and Coping.

**Cosmology, Physics, and Philosophy.** Including a New Theory of Aesthetics. Benjamin Gal-Or. 2nd ed. Springer-Verlag, New York, 1987. xxxvi, 522 pp., illus. \$39.95. Recent Advances as a Core Curriculum Course, vol. 1.

**The Cosmos from Space.** David H. Clark. Crown, New York, 1987. xiv, 162 pp., illus. \$14.95.

**Crows of the World.** Derek Goodwin. 2nd ed. University of Washington Press, Seattle, WA, 1987. 299 pp., illus., + plates. \$45. Reprint, 1986 ed.

**Current Concepts and Approaches to the Study of Prostate Cancer.** Donald S. Coffey *et al.*, Eds. Liss, New York, 1987. xviii, 822 pp., illus. \$130. Progress in Clinical and Biological Research, vol. 239. From a meeting, Prouts Neck, ME, Oct. 1985.

**Defects and Properties of Semiconductors.** Defect Engineering. J. Chikawa, K. Sumino, and K. Wada, Eds. KTK, Tokyo, and Reidel, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). viii, 261 pp., illus. \$94. Advances in Solid State Technology. From a symposium, Tokyo, May 1984.

**Density Matrices and Density Functionals.** Robert Erdahl and Vedene H. Smith, Jr., Eds. Reidel, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). xviii, 722 pp., illus. \$139. From a conference, Kingston, Ontario, Aug. 1985.

**Endocrinology and Physiology of Reproduction.** P. C. K. Leung *et al.*, Eds. Plenum, New York, 1987. x, 359 pp., illus. \$65. Based on a congress, Vancouver, British Columbia, 1986.

**Endothelialization of Vascular Grafts.** P. P. Zilla, R. D. Fasol, and M. Deutsch, Eds. Karger, Basel, 1987. vi, 257 pp., illus. \$132. From a workshop, Vienna, Austria, Nov. 1986.

**Engineer in Charge.** A History of the Langley Aeronautical Laboratory, 1917-1958. James R. Hansen. National Aeronautics and Space Administration, Washington, DC, 1987 (available as NASA SP-4305 from the Superintendent of Documents, Washington, DC). xxviii, 620 pp., illus. Paper, \$35. NASA History Series.

**Engineering Hemodynamics.** Application to Cardiac Assist Devices. Walter Welkowitz. 2nd ed. New York University Press, New York, 1987 (distributor, Colum-

bia University Press, New York). xxviii, 175 pp., illus. \$35. New York University Biomedical Engineering Series.

**Formal Methods in Developmental Psychology.** Progress in Cognitive Development Research. Jeffrey Bisanz, Charles J. Brainerd, and Robert Kail, Eds. Springer-Verlag, New York, 1987. xiv, 412 pp., illus. \$87. Springer Series in Cognitive Development.

**Foundations of In Vitro Fertilization.** Christopher M. Fredericks, John D. Paulson, and Alan H. DeCherney, Eds. Hemisphere (Harper and Row), 1987. xvi, 383 pp., illus. \$64. Reproductive Health Technology.

**Fourier Transform Infrared Characterization of Polymers.** Hatsuo Ishida, Ed. Plenum, New York, 1987. x, 449 pp., illus. \$79.50. Polymer Science and Technology, vol. 36. From a symposium, Philadelphia, PA, Aug. 1984.

**Giant Resonances in Atoms, Molecules, and Solids.** J. P. Connerade, J. M. Esteve, and R. C. Karnatak, Eds. Plenum, New York, 1987. xii, 570 pp., illus. \$95. NATO Advanced Science Institutes Series B, vol. 151. From an institute, Les Houches, France, June 1986.

**Glacial Geologic Processes.** David Drewry. Arnold, Baltimore, 1986. ii, 276 pp., illus. Paper, \$27.50.

**Glucosinolates in Rapeseeds.** Analytical Aspects. J.-P. Wathelet, Ed. Nijhoff, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). viii, 198 pp., illus. \$46. World Crops, vol. 13. From a seminar, Gembloux, Belgium, Oct. 1986.

**Graphics for Chemical Structures.** Integration with Text and Data. Wendy A. Warr, Ed. American Chemical Society, Washington, DC, 1987. ACS Symposium Series, 341. Based on a symposium, Anaheim, CA, Sept. 1986.

**Ground Water Quality Protection.** Larry W. Canter, Robert C. Knox, and Deborah M. Fairchild. Lewis, Chelsea, MI, 1987. xxviii, 562 pp., illus. \$54.95.

**Guide to the Otoliths of the Bony Fishes of the Northeast Atlantic.** Tero Härkönen. Danbiu Aps. Biological Consultants, Hellrup, Denmark, 1986. 256 pp., illus. \$80.

**H. A. Kramers.** Between Tradition and Revolution. M. Dresden. Springer-Verlag, New York, 1987. xxiv, 563 pp., illus. \$59.95.

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**Henry William Ravenel, 1814-1887.** South Carolina Scientist in the Civil War Era. Tamara Miner Haygood. University of Alabama Press, Tuscaloosa, AL, 1987. xiv, 204 pp., illus. \$22.95. History of American Science and Technology Series.

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**High-Tech Society.** The Story of the Information Technology Revolution. Tom Forester. MIT Press, Cambridge, MA, 1987. viii, 311 pp., illus. \$19.95.

**Historical Foundations of Educational Psychology.** John A. Glover and Royce R. Ronning, Eds. Plenum, New York, 1987. xiv, 446 pp., illus. \$50. Perspectives on Individual Differences.

**Hormones.** Anthony W. Norman and Gerald Litwack. Academic Press, Orlando, FL, 1987. xvi, 806 pp., illus. \$49.95.

**Indian Mounds of the Middle Ohio Valley.** A Guide to Adena and Ohio Hopewell Sites. Susan L. Woodward and Jerry N. McDonald. McDonald and Woodward, Newark, OH, 1986. x, 130 pp., illus. Paper, \$9.95. A McDonald and Woodward Guide to the American Landscape.

**The Individual in the Economy.** A Textbook of Economic Psychology. Stephen E. G. Lea, Roger M. Tarpy, and Paul Webley. Cambridge University Press, New York, 1987. xxiv, 627 pp. \$59.50; paper, \$18.95.

**Inductively Coupled Plasma Emission Spectroscopy.** Part 2, Applications and Fundamentals. P. W. J. M. Boumans, Ed. Wiley-Interscience, New York, 1987. xiv, 486 pp., illus. \$70. Chemical Analysis, vol. 90.

**Interfacing Thought.** Cognitive Aspects of Human-Computer Interaction. John M. Carroll, Ed. MIT Press, Cambridge, MA, 1987. xviii, 370 pp., illus. \$30. A Bradford Book. Based on a symposium, 1983.

**Introduction to Modern Virology.** N. J. Dimmock and S. B. Primrose. 3rd ed. Blackwell Scientific, Palo Alto, CA, 1987. x, 348 pp., illus. Paper, \$24.95. Basic Microbiology, vol. 2.

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**The Logic of U.S. Nuclear Weapons Policy.** A Philosophical Analysis. Corbin Fowler. Mellen, Lewiston, NY, 1987. xx, 266 pp. \$39.95. Problems in Contemporary Philosophy, vol. 4.

**The Long-Term Retention of Knowledge and Skills.** A Cognitive and Instructional Perspective. Marshall J. Farr. Springer-Verlag, New York, 1987. xii, variously paged. Paper, \$27.50. Recent Research in Psychology.

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**Methods for Assessing the Effects of Mixtures of Chemicals.** Velimir B. Vouk *et al.*, Eds. Wiley, New York, 1987. xxxiv, 894 pp., illus. \$179.95. SGOMSEC, 3; SCOPE, 30. Based on a workshop, Guildford, U.K., Aug. 1983.

**Mirrors of Minds.** Patterns of Experience in Educational Computing. Roy D. Pea and Karen Sheingold, Eds. Ablex, Norwood, NJ, 1987. xviii, 329 pp., illus. \$42.50; paper, \$19.95.

**Molecular Neurobiology.** Recombinant DNA Approaches. Steve Heinemann and James Patrick, Eds. Plenum, New York, 1987. xviii, 297 pp., illus. \$49.50. Current Topics in Neurobiology.

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**Multidimensional Scaling.** History, Theory, and Applications. Forrest W. Young, Robert M. Hamer, Ed. Erlbaum, Hillsdale, NJ, 1987. xviii, 317 pp., illus. \$39.95.

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**Nathaniel Southgate Shaler and the Culture of American Science.** David N. Livingstone. University of Alabama Press, Tuscaloosa, AL, 1987. xiv, 395 pp., illus. \$32.95. History of American Science and Technology Series.

**Nearly Normal Galaxies.** From the Planck Time to the Present. S. M. Faber, Ed. Springer-Verlag, New York, 1987. xvi, 464 pp., illus. \$35. From a workshop, Santa Cruz, CA, July-Aug. 1986.

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**New Generation Guide to the Birds and Europe.** Christopher Perrins. University of Texas Press, Austin, TX, 1987. 320 pp., illus. \$14.95. Corrie Herring Hooks series, no. 8.

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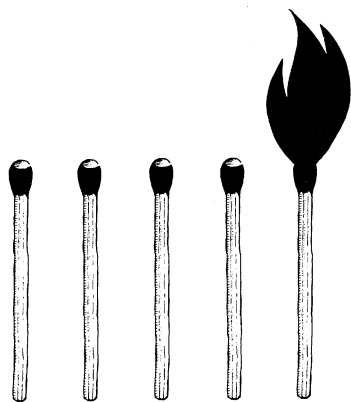
**Optical Properties of Narrow-Gap Low-Dimensional Structures.** C. M. Sotomayor Torres *et al.*, Eds. Plenum, New York, 1987. x, 362 pp., illus. \$62.50. NATO Advanced Science Institutes Series B, vol. 152. From a workshop, St. Andrews, Scotland, July-Aug. 1986.

**Order in the Amorphous "State" of Polymers.** Steven E. Keinath, Robert L. Miller, and James K. Rieke, Eds. Plenum, New York, 1987. xiv, 478 pp., illus. \$79.50. From a symposium, Midland, MI, Aug. 1985.

**The Organization of Perception and Action.** A Theory for Language and Other Cognitive Skills. Donald G. McKay. Springer-Verlag, New York, 1987. xxii, 233 pp., illus. Paper, \$29.95. Cognitive Science Series.

**Perinatal Development.** A Psychobiological Perspective. Norman A. Krasnegor *et al.*, Eds. Academic Press, Orlando, FL, 1987. xiv, 448 pp., illus. \$55. Behavioral Biology.

**Physic and Philanthropy.** A History of the Wellcome Trust, 1936-1986. A. R. Hall and B. A. Bembridge. Cambridge University Press, New York, 1987. xiv, 479 pp., illus. \$39.50.



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**The Politics of Education.** Conflict and Consensus on Capitol Hill. John Brademas. University of Oklahoma Press, Norman, OK, 1987. xviii, 134 pp. \$14.95. Julian J. Rothbaum Distinguished Lecture Series, vol. 1.

**Pottery Analysis.** A Sourcebook. Prudence M. Rice. University of Chicago Press, Chicago, IL, 1987. xxiv, 559 pp., illus. \$45.

**A Practical Introduction to Borehole Geophysics.** An Overview of Wireline Well Logging Principles for Geophysicists. J. Labo. Society of Exploration Geophysicists, Tulsa, OK, 1987. viii, 330 pp., illus. \$56. Geophysical References, vol. 2.

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**Proceedings, CERN Accelerator School.** Advanced Accelerator Physics. (Oxford, England, Sept. 1985.) S. Turner, Ed. CERN, Geneva, 1987. 2 vols. xxiv, 836 pp., illus.

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**Proceedings of the International Conference on Recent Advances in Hamiltonian Systems.** (L'Aquila, Italy, June 1986.) G. F. Dell'Antonio and B. D'Onofrio, Eds. World Scientific, Singapore, 1987 (U.S. distributor, Taylor and Francis, Philadelphia). xiv, 242 pp. \$40.

**Progress in Bone Marrow Transplantation.** Robert Peter Gale and Richard Champlin, Eds. Liss, New York, 1987. xxvi, 1012 pp. \$160. UCLA Symposia on Molecular and Cellular Biology, vol. 53. From a symposium, Keystone, CO, April 1986.

**Prostaglandins and Related Compounds.** Bengt Samuelsson, Rodolfo Paoletti, and Peter W. Ramwell, Eds. Raven, New York, 1987. 2 vols. lxxvi, 1168 pp., illus. \$140. Advances in Prostaglandin, Thromboxane, and Leukotriene Research, vol. 17. From a conference, Florence, Italy, June 1986.

**Prostaglandins in Clinical Research.** Helmut Singinger and Karsten Schrör, Eds. Liss, New York, 1987. xxiv, 501 pp., illus. \$86. Progress in Clinical and Biological Research, vol. 242. From a symposium, Bad Ischl, Austria, Sept. 1986.

**Prostate Cancer.** Gerald P. Murphy *et al.*, Eds. Part A, Research, Endocrine Treatment, and Histopathology. xl, 586 pp., illus. \$98. Part B, Imaging Techniques, Radiotherapy, Chemotherapy, and Management Issues. xxxviii, 545 pp., illus. \$98. Liss, New York, 1987. Progress in Clinical and Biological Research, vol. 243. From a symposium, Paris, June 1986.

**Psychology in Product Liability and Personal Injury Litigation.** Martin I. Kurke and Robert G. Meyer, Eds. Hemisphere (Harper and Row), New York, 1987. xiv, 240 pp. \$44.50.

**Quantum Field Theory.** Lewis H. Ryder. Cambridge University Press, New York, 1986. xii, 443 pp., illus. Paper, \$24.95. Reprint, 1985 ed.

**Real Brains, Artificial Minds.** John L. Casti and Anders Karlqvist, Eds. Elsevier North-Holland, New York, 1987. xviii, 226 pp., illus. \$48. Based on a workshop, Abisko, Sweden, 1986.

**Real-Structure Modelling.** A Simulation-Based Methodology for the Description of Large Scale Units. Norbert Müller, Karl-Peter Schön, and Bernd Thober. Verlag TÜV Rheinland, Cologne, F.R.G., 1987. 234 pp., illus. DM 84. Interdisciplinary Systems Research, 87.

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**Rodent Tumor Models in Experimental Cancer Therapy.** Robert F. Kallman, Ed. Pergamon, New York, 1987. xviii, 310 pp., illus. \$55. Based on a workshop, Reisenburg, F.R.G., Oct. 1984.

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**Scientific Genius and Creativity.** Readings from *Scientific American*. Freeman, New York, 1987. viii, 110 pp., illus. Paper, \$11.95.

**Sensors and Actuators.** State of the Art of Sensor Research and Development. S. Middelhoeck and J. Van der Spiegel, Eds. Elsevier Sequoia, Lausanne, Switzerland, 1987. viii, 425 pp., illus. SwF270. Reprinted from *Sensors and Actuators*, vol. 10.

**Sexuality in Plants and Its Hormonal Regulation.** M. Kh. Chailakhyan and V. N. Khrianin. Springer-Verlag, New York, 1987. xiv, 159 pp., illus. \$67. Translated from the Russian edition (Moscow, 1982) by Vanya Lorocho.

**Sociology and Scientism.** The American Quest for Objectivity, 1880-1940. Robert C. Bannister. University of North Carolina Press, Chapel Hill, 1987. x, 301 pp. \$29.95.

**Solitons and Instantons, Operator Quantization.** V. L. Ginzburg, Ed. Nova Science, Commack, NY, 1987. vi, 299 pp., illus. \$92. Proceedings of the Lebedev Physics Institute of the Academy of Sciences of the USSR, vol. 165. Translated from the Russian edition by Kevin S. Hendzel.

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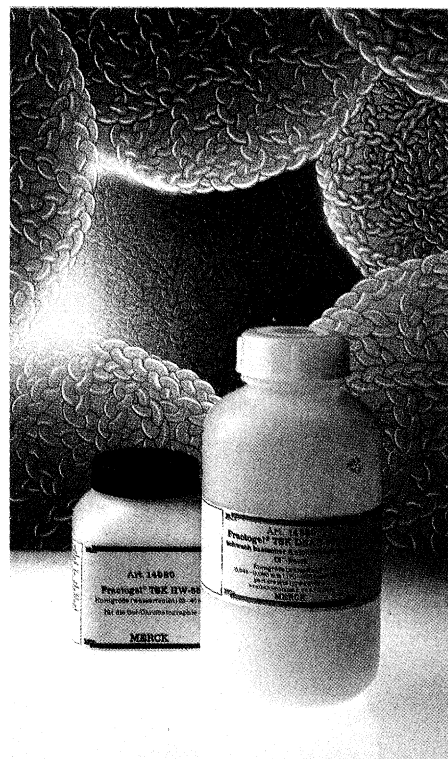
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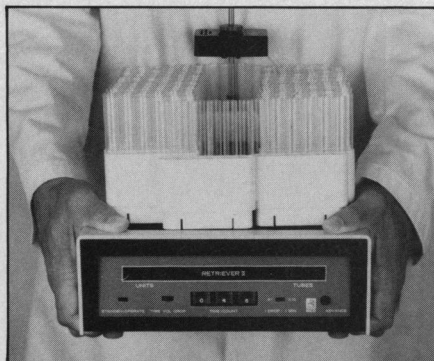
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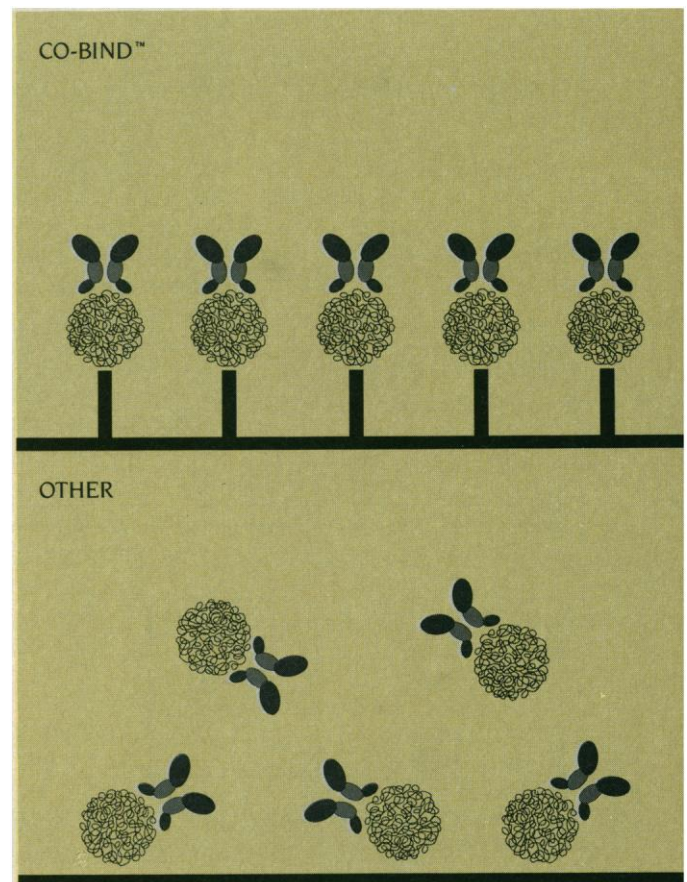
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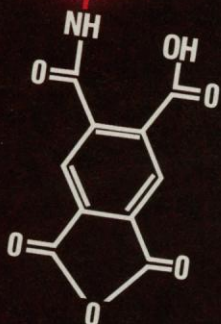
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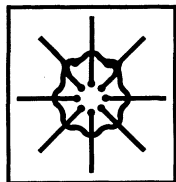
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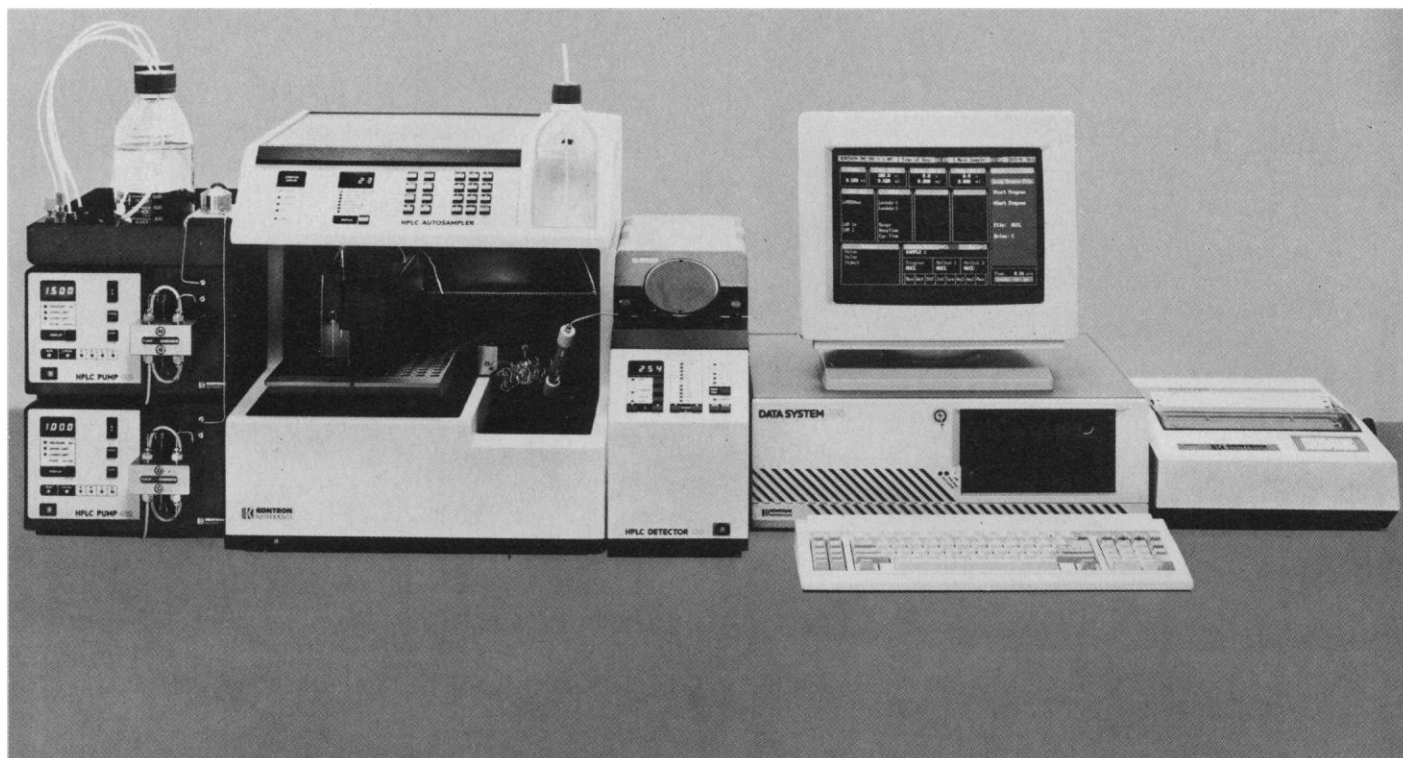
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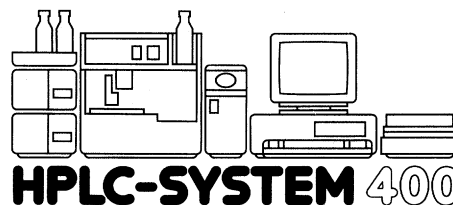
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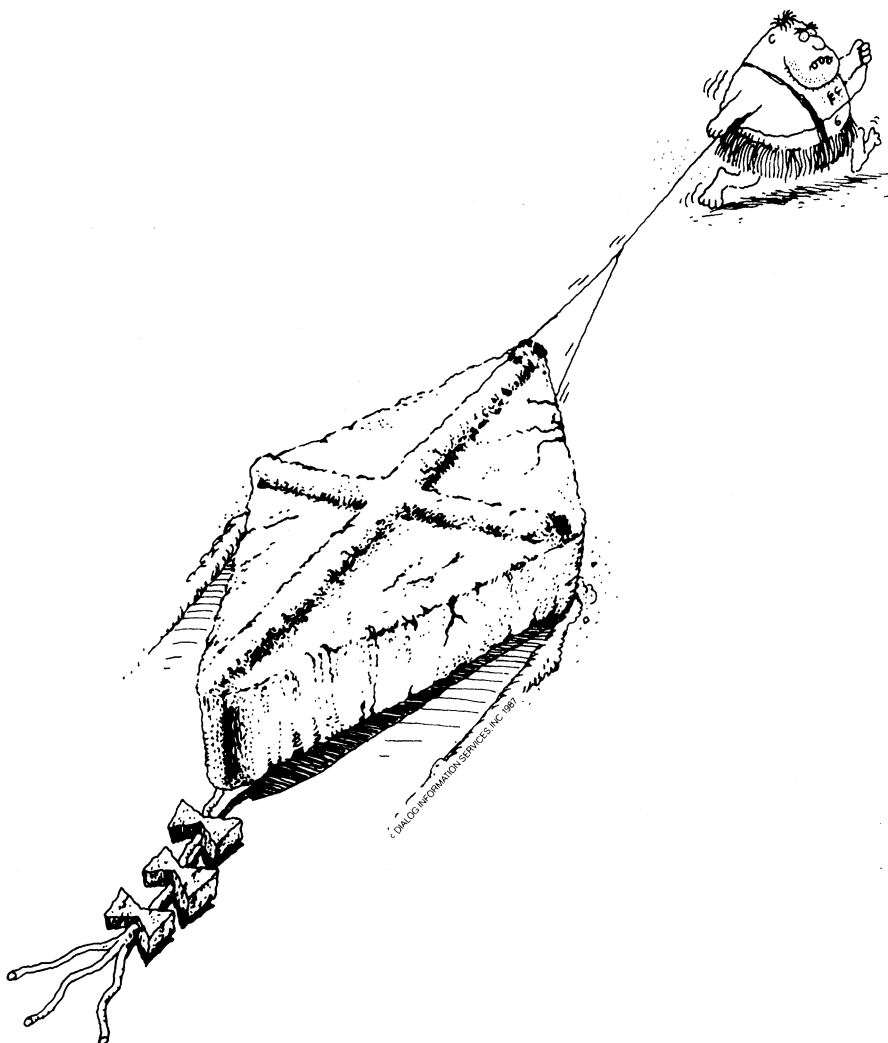
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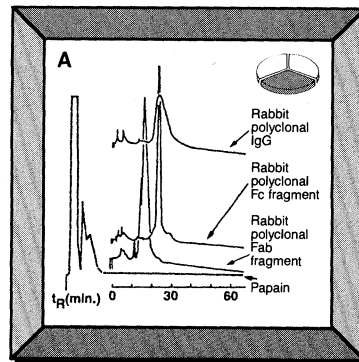
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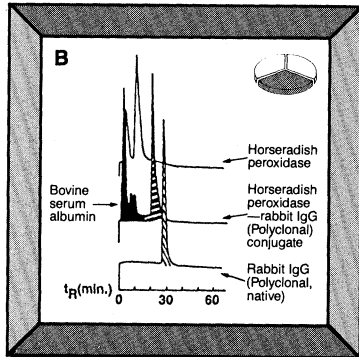
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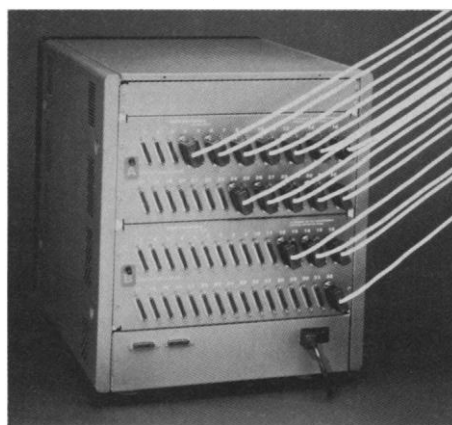
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The DPC Gel Casting Tower casts gels for DPC Mini Gel devices. The casting tower measures 3.5 by 10.3 by 9.4 cm and holds as many as eight glass cassettes. The disposable prewashed and preassembled glass cassettes are available separately; each has a 12-tooth comb in the top and comes in both 8 by 10 cm and 10 by 10 cm formats. An adjustable plate within the tower allows easy removal of the gels after polymerization. Gels can be as tall as 9 cm. Integrated Separation Systems. Circle 627.

### Stain for Electrophoresis

The Protostain Silver Stain System for Protein Visualization is a kit for visualizing small quantities of proteins and nucleic acids in any matrix or medium, including polyacrylamide gels, agarose gels, and tissue preparations, in 1 hour. Bands appear black on a clear background because the stain sensitizer prevents yellow stains from oxidation and background darkening from reactions with the gel. One kit stains 20 gels. National Diagnostics. Circle 623.

### Literature

*Applications of Liquid Chromatography in the Life Sciences* is a folder containing application and technical notes on biochemical applications of high-performance liquid chromatography as well as a descriptive brochure about an amino acid analyzer. Hewlett-Packard. Circle 633.

*Digital Weight Indicators & Accessories* is a catalog of electronic and mechanical scales and equipment. Rice Lake Weighing Systems. Circle 634.

*Separon HEMA* is a brochure that describes the characteristics of hydroxyethyl methacrylate, a sorbent, in high-performance liquid chromatography. Tessek/Senetek. Circle 635.

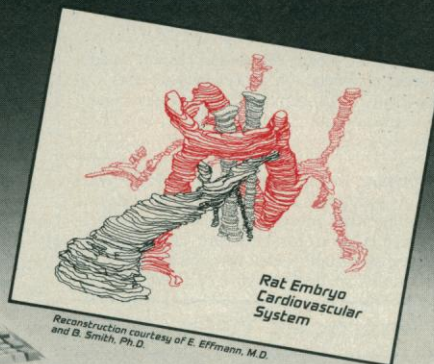
*Chemicals 1987/1988* is a catalog of bioactive peptides, synthetic intermediates, and substrates. Bachem Fine Chemicals. Circle 636.

*C-R6A Chromatopak* is a brochure about a data processor for chromatography that can be programmed in BASIC and that has an x-y printer-plotter built in. Shimadzu Scientific Instruments. Circle 637.

*Laboratory Ware* is a brochure describing disposable and reusable glassware and plasticware, including pipettes, scintillation vials, culture tubes, reaction tubes, and oil centrifuge tubes. VWR Scientific. Circle 640.

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Circle No. 141 on Readers' Service Card

## HHMI-NIH Research Scholars at the National Institutes of Health

The Howard Hughes Medical Institute (HHMI) and the National Institutes of Health announce that applications will be accepted for the fourth class (1988-1989) of Research Scholars to start in the summer of 1988. HHMI-NIH scholars are selected from medical schools, usually after the first two years, for a year of laboratory research at the NIH in Bethesda. Scholars must be United States citizens or permanent residents attending medical school in the United States or Puerto Rico. They will be paid as employees of HHMI and housed on the NIH campus. Applications must be received by January 15, 1988. Candidates will be notified of the results by April 1, 1988.

Application kits and brochures have been mailed to the deans' offices of all medical schools. Additional kits and brochures can be obtained from:

Howard Hughes Medical Institute  
1 Cloister Court  
Bethesda, Maryland 20814-1460  
(301) 951-6700

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20 NOVEMBER 1987

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Circle No. 3 on Readers' Service Card



# Personnel Placement

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

## LINE CLASSIFIED ADVERTISING DEADLINES:

Thursday, 10 a.m., 2 weeks prior to issue date (mailed on issue date).

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

**LINE CLASSIFIED (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth):** \$35.00 per line; \$350 minimum, per week (minimum charge covers one inch on a single column; one inch equals 10 lines of 52 characters and spaces per line). No charge for use of box number. No agency commission for ads less than 4 inches. No cash discount. Prepayment required for all foreign ads. Purchase orders and/or cover letter including billing address required for all other advertising.

## To ESTIMATE ad cost:

Structure ad copy on a separate page, on lines of 52 characters and spaces. Include any desired heading. Each line of heading, and/or extra line spaces, and all partial lines (including centered reply information) are counted as full lines. Ad titles located within the text are printed in boldface caps and are only 32 characters per line. In ESTIMATING the cost, multiply total lines  $\times$  \$35.00 = approximate cost of ad. (This is an approximate cost ONLY: Allow for variation between estimated lines and actual typeset lines and the resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment.)

## CANCELLATION POLICY:

NOTE: Ad cancellations made after Thursday, TWO weeks prior to issue date incur a 10% production charge. Final deadline for cancellations is 12 p.m. Tuesday, ONE week prior to issue date. Cancellations must be in writing.

Send copy for all **Positions Wanted** ads and **Line Classified** ads less than 1/6 page in size (39 lines) to:

**SCIENCE Classified Advertising**  
1333 H Street, NW, Room 940  
Washington, DC 20005  
Telephone: 202-326-6555

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

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

Blind ad replies should be addressed as follows:

Box (give number)  
**SCIENCE**  
1333 H Street, NW  
Washington, DC 20005

## POSITIONS WANTED

**Computer Systems Analyst, Database Specialist, M.A. (MIS)** with experience in building large marine ecosystem databases. dBASE III III PLUS, System 1032, Inform, Datman database management systems; VAX-VMS, IAS-PDS, CALL-MVS, MS-DOS operating systems; JCL, PL/I and command languages of DBMS. Seeking position in designing, building, and maintaining oceanographic database systems. Southern New England area. Box 157, **SCIENCE**.

**Environmental Engineer** seeks position on West Coast. Experience in aquatic toxicology research including water/wastewater analysis, design and construction of exposure apparatus and conductance of acute and chronic toxicity tests. Box 158, **SCIENCE**.

**Immunologist.** Ph.D. Extensive academic and biotechnology industry research background. Specialized experience in hybridoma technology, monoclonal antibodies, lymphokines, and large-scale tissue culture. Seeking exciting position in academic/industrial group. Box 156, **SCIENCE**.

## POSITIONS WANTED

**M.S. in Biology.** Experience in plant and human tissue culture, genetic toxicology, immunohistochemistry and molecular biology, wide variety of analytical techniques. Language skills. Prefer San Diego area. Monika Clausen, Hochheider Weg 29, 29 Oldenburg, FRG.

**Ph.D. Cytogeneticist.** Board-certified in clinical cytogenetics with good experience in cancer cytogenetics and molecular diagnosis of cancer. Seeking service-oriented position in a hospital or medical school. Box 172, **SCIENCE**.

**Protein Biochemist.** Research associate, 1981; 17 years of experience in industrial and basic research. Enzyme glycoprotein, membrane protein, and antibody purification and characterization for structure and function, membrane recombination. Seeks research/academic/industrial position in Canada. Box 161, **SCIENCE**.

## POSITIONS OPEN

### ANIMAL PHYSIOLOGY

The Biology Department of George Mason University is seeking applicants for a tenure-track position to begin 1 September 1988. Major teaching responsibilities will be undergraduate and graduate courses in animal physiology. The applicant should have a research interest in an area such as aquatic toxicology or environmental physiology that will contribute to the Ph.D. program in Environmental Biology-Public Policy. Anticipated rank is at the assistant professor level. Candidates should have a Ph.D. by 1 September 1988. Send curriculum vitae, names of three references, and statement of research interests by 15 January 1988 to: **Chairperson, Physiology Search Committee, Department of Biology, George Mason University, Fairfax, VA 22030.** *George Mason is an Affirmative Action/Equal Opportunity Employer.*

### ASSISTANT PROFESSOR

We are recruiting for a molecular biologist with interest in connective tissue matrix gene regulation. Professional degree (M.D., Ph.D., or equivalent) and 2 years of postdoctoral research training required. Interested applicants should contact: **Department of Medicine, University of Tennessee, Memphis, 956 Court Avenue, Memphis, TN 38163.** *The University of Tennessee is an Equal Opportunity Employer.*

### WASHINGTON UNIVERSITY DEPARTMENT OF PHARMACOLOGY

Seeking an outstanding scientist for a tenure-track **ASSISTANT PROFESSOR** position. The individual must be capable of developing a strong, independent research program which will complement existing programs in cellular, molecular and neurobiology. Send curriculum vitae and a summary of research interests and plans to: **E. M. Johnson, Jr., Department of Pharmacology, Washington University Medical School, 660 South Euclid Avenue, St. Louis, MO 63110.** *Washington University is an Equal Opportunity Employer.*

**ASSISTANT PROFESSOR—Cell-molecular biology.** Tenure-track, to start September 1988. Ph.D., vigorous research program including sponsoring of M.S. students, commitment to undergraduate teaching, required. Anatomy experience helpful. Open until filled, first screening by 2 January 1988. Send cover letter and curriculum vitae to: **Dr. Sidney L. Beck, Chair, Department of Biological Sciences, DePaul University, Chicago, IL 60614.**

### ASSISTANT PROFESSOR OF BIOLOGY

Tenure-track position, to complement instruction in microbiology or immunology and develop a viable research program in such areas as immunology, microbial genetics, or radiation biology. Ph.D. requirement, postdoctoral experience preferred. Research specialty must be compatible with existing Ph.D. programs in molecular biology and radiation biology. Appointment effective 1 September 1988. Send application, curriculum vitae, and names, addresses, and telephone numbers of at least three references to: **Dr. F. Schwalm, Department of Biology, Texas Woman's University, P.O. Box 23971, Denton, TX 76204.** Screening of applications will begin 21 December 1987 and continue until position is filled.

*Texas Woman's University is a State-supported University and is an Equal Opportunity Employer.*

## POSITIONS OPEN

Albert Einstein College, The Department of Neuroscience seeks investigators for a position at the **ASSISTANT PROFESSOR** level with interests in molecular neurobiology. Preference will be given to individuals with expertise in molecular biology or cellular neurophysiology. Send curriculum vitae, bibliography, and names of three references to: **Dr. Michael V. L. Bennett, Chairman of the Department of Neuroscience, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, NY 10461.** *An Equal Opportunity Employer.*

### THE UNIVERSITY OF TEXAS AT DALLAS ASSISTANT PROFESSOR BIOCHEMISTRY/MOLECULAR BIOLOGY

The Biology Programs of the University of Texas at Dallas invite applications for a tenure-track position at the assistant professor level beginning 1 September 1988. While the area of specialization is open, applicants should be actively engaged in the broad area of **BIOCHEMISTRY, MOLECULAR, OR CELLULAR BIOLOGY.** Candidates should have at least 2 years of postdoctoral experience and show evidence of the development of a vigorous and independent research program with the capability of obtaining external support. The Biology department is well-equipped, and has 12 faculty and about 60 M.S./Ph.D. students. The applicant will be expected to teach a portion of the graduate course in biochemistry, preferably the nucleic acids section, and an elective in his/her field of specialization. Send curriculum vitae (*indication of sex and ethnicity for Affirmative Action statistical purposes is requested but not required*), a short description of research plans, and names of three or more references to:

**Academic Search #283**  
**The University of Texas at Dallas**  
**P.O. Box 830688**  
**Richardson, TX 75083-0688**

Applications should be received by 31 January 1988. *The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.*

### ASSISTANT PROFESSOR DEPARTMENT OF MICROBIOLOGY

The University of Alabama at Birmingham invites applications for a tenure-earning position in the area of viral crystallography. Applicants should have a strong background in biology and chemistry, and demonstrated experience in crystallographic studies of animal viruses. Submit curriculum vitae, a summary of research interests, and the names and addresses of three references to: **Dr. Kenneth J. Roosen, Chairman, Department of Microbiology, University of Alabama at Birmingham, Birmingham, AL 35294.**

*The University of Alabama at Birmingham is an Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT PROFESSOR—TENURE TRACK

The Department of Biological Sciences of the University of Cincinnati is searching for an assistant professor to join an expanding group of environmental and evolutionary biologists for 1 September 1988. This person would study the direct and/or indirect mechanisms of toxicants in natural ecosystems. The research may include the study of plant, animal, or microbial systems, using modern methods to answer ecological question. Ph.D. required and postdoctoral experience desirable. The successful candidate will be expected to conduct a vigorous, extramurally funded research program, train graduate students and teach a course in her/his specialty and an undergraduate course. Applicants should send curriculum vitae, a description of his/her research interests and goals, and have three letters of references sent by 15 January 1988 to: **Dr. J. Robie Vestal, Chairman, Ecological Toxicologist Search Committee, Department of Biological Sciences, University of Cincinnati, OH 45221-0006.** *The University of Cincinnati is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT RESEARCH SCIENTIST.** Candidate with M.S. or Ph.D. in biochemistry and minimum of 2 years of experience in biochemistry essential with HPLC and GC experience required. Will participate in research project studying metabolic diseases in children. Please send curriculum vitae and names of three references to: **Dr. Selma Snyderman, NYU Medical Center, 550 First Avenue, New York, NY 10016.** *Equal Opportunity Employer M/F.*

## POSITIONS OPEN

### ALBERT EINSTEIN COLLEGE OF MEDICINE

The Department of Cell Biology invites applications for a position at the level of **ASSISTANT PROFESSOR**. The research environment is particularly attractive for candidates who combine genetic and molecular approaches to the study of eukaryotic cells. Areas of particular interest to the Department include, but are not limited to, structure of the nucleus, nucleocytoplasmic interactions/communication, molecular trafficking, intra- and extracellular motility, and cell cycle regulation.

Successful candidates will be expected to establish an independent research program, to direct graduate students and postdoctoral fellows, and to participate in graduate-level teaching. To apply, please send curriculum vitae, a summary of past research experience, and a description of proposed future research, as well as the names of four referees, to: **Dr. Jonathan R. Warner, Chairman, Department of Cell Biology, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, NY 10461. An Equal Opportunity Employer.**

### ASSISTANT PROFESSOR OF PHYSIOLOGY

The Department of Physiology and Biophysics of the University of Louisville School of Medicine invites applicants for a tenure-track assistant professor position. An applicant should have a Ph.D. or M.D. degree, 2 to 3 years of postdoctoral research training, and research expertise in cardiovascular interaction with the gastrointestinal, systemic endocrine, and/or central nervous systems. This position will require development of an active, independent research program, some collaboration with ongoing Departmental research programs, and participation in team teaching to meet Departmental responsibilities. The salary is from state-funded sources and is nationally competitive. It is anticipated that the successful candidate will be identified for a starting date by July 1988. Send curriculum vitae, and the names of three references by 30 January 1988 to: **Patrick D. Harris, Ph.D., Professor and Chairman, Department of Physiology and Biophysics, Health Sciences Center, University of Louisville, Louisville, KY 40292. The University of Louisville is an Affirmative Action/Equal Opportunity Employer.**

**ASSISTANT PROFESSOR (TENURE TRACK) IN HEALTH SCIENCE** available September 1988. To teach graduate and undergraduate courses in health science, engage in scholarly activities, advise students, serve on committees, and participate in other activities as appropriate. Salary range: \$27,588 to \$38,136 for the academic year depending on qualifications and experience and ability. Expertise in health administration, research methods, data analysis and community health organization is desirable. Applications will be accepted until the position is filled but will not close prior to 1 March 1988. Send application, curriculum vitae, three letters of recommendation and all transcripts to:

**Sandra K. Cross, Ed.D., Chair Search Committee  
Department of Health Science and Human Ecology  
California State University  
5500 University Parkway  
San Bernardino, CA 92407**

*An Equal Opportunity/Affirmative Action, Section 504, Title IX Employer.*

### ASSISTANT/ASSOCIATE PROFESSOR MOLECULAR PARASITOLOGY

The Department of Medical and Molecular Parasitology invites applications from individuals with strong research credentials in molecular biology for a tenure-track position. Applicants must hold a Ph.D. degree in molecular biology, have several years of postdoctoral training, and proven ability to conduct independent research. The candidate would join our ongoing fully-funded research program which involves the investigation of the structure and function of selected genes of human malaria parasites. Prior experience with expression cloning systems is preferred. Applicants will be expected to participate in the teaching of graduate and postgraduate students. Please send curriculum vitae and three references to: **Ruth S. Nussenzweig, M.D., Ph.D., Professor and Chairperson, Department of Medical and Molecular Parasitology, 341 East 25th Street, New York, NY 10010. New York University Medical Center is an Equal Opportunity Employer.**

## POSITIONS OPEN

**ASSISTANT PROFESSOR**, tenure-track, radiopharmacy. Responsibilities: Maintenance of an active extramurally-funded research program and participation in the graduate and undergraduate programs. Ph.D. in radiopharmaceutical development or closely related discipline required. Preference given to candidates with B.S. degree in pharmacy. Twelve-month appointment with starting date of 1 July 1988. Salary will be commensurate with experience. Deadline: 15 February 1988. Send letters, curriculum vitae, statement of career objectives, three references to: **William B. Hladik III, Chair, Radiopharmacy Search Committee, College of Pharmacy, University of New Mexico, Albuquerque, NM 87131. Affirmative Action/Equal Opportunity Employer.**

### ASSISTANT PROFESSOR OF TOXICOLOGY (PULMONARY CELL BIOLOGIST/IMMUNOLOGIST)

The Environmental Health Sciences Center at the University of Rochester School of Medicine and Dentistry invites applications for a tenure-track position at the assistant professor level to be filled by or before September 1988. Applicants must have a doctoral degree, postdoctoral experience, and a strong commitment to study mechanisms of lung injury at a cellular and molecular level. Successful candidates will be expected to develop interactive, independent research programs and participate in graduate education programs. Applicants should send their curriculum vitae, names of three references, reprints, and brief description of their research interest by 15 January 1988 to:

**Guenter Oberdoerster, Ph.D.  
University of Rochester  
School of Medicine and Dentistry  
Box BPHYS  
575 Elmwood Avenue  
Rochester, NY 14642**

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

### ASSOCIATE PROJECT DIRECTOR NSF-MRCE PROGRAM

Meharry Medical College has received \$5,000,000 to establish a Minority Research Center of Excellence (MRCE) in Cell and Molecular Biology. A component of this effort is an outreach program to recruit minority high school, undergraduate and graduate students to the biomedical sciences and increase the number of students receiving postgraduate degrees. We are currently recruiting an associate project director to be responsible for this outreach component.

The Associate Project Director will provide important leadership for the NSF-MRCE program, and will be responsible for establishing the junior high, high school and undergraduate programs to attract minorities to science disciplines. A college degree is required, preferably in a science discipline; a graduate degree is preferred. Previous experience with high school or college programs is desired. Some travel will be involved in visiting and recruiting high school and undergraduate students. Salary will be based on experience.

For further information, please contact:

**George C. Hill, Ph.D., Project Director  
Division of Biomedical Sciences  
Meharry Medical College  
1005 D.B. Todd Jr. Boulevard  
Nashville, TN 37208  
Telephone: 615-327-6193**

The deadline for receiving applications is 18 December 1987 with the anticipated starting date being 30 January 1988, or as soon as possible.

**BACTERIOLOGIST.** Tenure-track assistant Professor (target level) beginning fall 1988. Ph.D. required; university/college teaching experience and/or postdoctoral experience preferred. Expectations for the position are to share teaching responsibilities for a core course in microbiology and laboratories in microbiology service courses, to teach in the University Studies Program, to develop a course in microbial physiology, and maintain an active research program. Applicants should send curriculum vitae, undergraduate and graduate transcripts, a brief statement of teaching philosophy and research interests, and three letters of recommendation to: **Dr. C. T. Train, Chairman, Department of Biology, Southeast Missouri State University, Cape Girardeau, MO 63701 by 15 January 1988. Southeast Missouri State University is an Equal Opportunity/Minority/Affirmative Action Employer.**

## POSITIONS OPEN

**ASSISTANT RESEARCH PROFESSOR OF PHYSICS** to perform research in the area of crystal growth from the melt and by vapor transport. Supervise student research and perform service to the University as appropriate. Requires Ph.D. in solid state physics. Salary \$32,388 per year. Send letter of application, curriculum vitae, and three letters of reference to: **Mrs. Armstrong, Alabama State Employment Service, P.O. Box 428, Huntsville, AL 35804. Job Order No. AL0416792. The University of Alabama in Huntsville is an Affirmative Action/Equal Opportunity Employer.**

### ASSOCIATE DIRECTOR DIVISION OF CANCER CONTROL FOX CHASE CANCER CENTER

The Fox Chase Cancer Center is seeking candidates for the position of associate director, Division of Cancer Control. The candidate should be a physician who has research and administrative experience, plus peer-reviewed publications in cancer prevention, cancer detection, health services research or cancer biology, as it relates to chemoprevention or applied epidemiology. This new academic staff position is available 1 July 1988.

The Associate Director for Cancer Control will assist the Director, **Paul F. Engstrom, M.D.**, in planning, managing, and evaluating the research program of the Division, implementing the current research agenda, especially of the Cancer Control Science Program project grant, representing the Fox Chase Cancer Center at local and regional cancer prevention and control meetings, and interacting with community physicians. In addition, he/she is expected to develop an independent laboratory or clinical research program which will enhance the current research activities of the Division.

The salary and research support is negotiable. *Fox Chase Cancer Center is an Equal Opportunity Employer.* Interested candidates should send a letter of inquiry plus curriculum vitae to: **Search Committee for Associate Director of Cancer Control, c/o Director of Personnel, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.**

**BIOCHEMIST:** The Chemistry Department of Colby College invites applications for a tenure-track assistant professorship in biochemistry commencing 1 September 1988. The candidate should have a Ph.D. in chemistry or biochemistry, with expertise in molecular biology techniques, an interest in teaching, and research interests amenable to collaboration with undergraduates. The successful applicant will teach a course with laboratory at the biochemistry/molecular biology interface, participate in two other courses in the regular chemistry sequence, and direct undergraduate research projects. Colby is recognized for excellence in undergraduate education and close student-faculty interaction. Curriculum vitae, transcripts, statement of teaching and research interests, and three letters of recommendation should be sent to: **Professor Wayne L. Smith, Chair, Department of Chemistry, Colby College, Waterville, ME 04901.** The closing date for completed applications is 30 December 1987. *Colby is an Affirmative Action/Equal Opportunity Employer and specifically encourages applications from minorities and women.*

**BIOLOGIST:** Furman University has a 9-month non-tenure position to replace a person on sabbatical leave. Duties will be to teach freshman level courses and share a course in research techniques. Preference will be given to a candidate with experience in biostatistics. Candidates must have the Ph.D. degree and a strong interest and aptitude in teaching. Furman is a very selective liberal arts school of 2500 students. Submit curriculum vitae, transcripts, and three letters of reference by 1 January 1988 to: **Dr. John A. Snyder, Chairman, Department of Biology, Furman University, Greenville, SC 29613. An Equal Opportunity/Affirmative Action Employer.**

**BIOLOGY: ASSISTANT PROFESSOR**—develop upper-level courses in molecular biology and teach introductory biology, plus other courses such as eukaryotic cell biology, human genetics, or microbial physiology depending on background; Ph.D. and evidence of teaching ability required; opportunity to develop a research program, preferably in eukaryotic molecular biology. Tenure-track position begins fall 1988. Letters of application including names and addresses of three references must be received by 4 January 1988. Direct letters to: **Dr. John P. Shontz, Chairperson, Department of Biology, Grand Valley State College, Allendale, MI 49401. Equal Opportunity Employer/Affirmative Action.**

## BIOLOGY

### MANAGER, MOLECULAR VIROLOGY

Wyeth-Ayerst Laboratories, one of the world's largest and most respected pharmaceutical companies, has an immediate opening for the Department Head in its Molecular Virology department in Radnor, an exceptional suburb of Philadelphia. The position requires ten years experience in molecular biology and virology research in a pharmaceutical environment, Ph.D required.

Responsibilities of this position include the initiation, design, management and direction of research projects, specifically relating to vaccines and other biological product development. You will represent your department at meetings and scientific conferences, prepare written reports and supervise new ideas and procedures.

Wyeth-Ayerst offers a competitive salary and a comprehensive benefit plan. Qualified applicants should send their resume and salary history in confidence to: **Position 204, Personnel Manager, Wyeth-Ayerst Laboratories, P.O. Box 8299, Philadelphia, PA 19101.** Equal Opportunity Employer, M/F/H/V responses encouraged.

## Wyeth Laboratories



## AAAS MASS MEDIA SCIENCE AND ENGINEERING FELLOWS PROGRAM

The American Association for the Advancement of Science (AAAS) invites outstanding students in the natural and social sciences and engineering, preferably those at the graduate level, to apply for the 1988 Mass Media Science and Engineering Fellows Program. Students majoring in English, journalism, or other nontechnical fields are not eligible for these fellowships.

Fellows will work as reporters, researchers, production assistants, and script consultants for 10 weeks during the summer at newspapers, news magazines, and radio and television stations across the country. Fellows will have the opportunity to participate in the news making process, to increase their understanding of editorial decision making, and to develop skill in conveying to the public a better understanding and appreciation of science and technology.

AAAS pays a \$300 weekly stipend and travel expenses. Deadline for receipt of applications is 1 February 1988. *Minorities and persons with disabilities are especially encouraged to apply.*

For further information and applications, write:

**Mass Media Science and Engineering  
Fellows Program  
AAAS  
1333 H Street, NW  
Washington, D.C. 20005**

## Biochemist/ Molecular Biologist

The Agricultural Research Division of American Cyanamid Company currently has an opening for a biochemist/molecular biologist to join an energetic and growing Molecular and Cellular Biology Group.

This individual should possess an M.S. or B.S. and have extensive laboratory experience. Working knowledge of molecular biological techniques is essential; tissue culture experience and familiarity with protein purification techniques is desirable. The position involves using techniques of molecular biology, such as transfection, RNase protection, and DNA mobility shift assays to study the regulation of cell division in response to isolated growth factors. This is an excellent opportunity for scientific growth and development, with the opportunity for considerable independence.

American Cyanamid offers a competitive compensation and benefits package. For prompt and confidential consideration, forward your resume, and the names and addresses of three references by 1/1/88 to the Employment Office.



**American Cyanamid Company**  
Agricultural Research Division  
P.O. Box 400  
Princeton, NJ 08540

An Equal Opportunity Employer M/F/H

## SENIOR CLINICAL RESEARCH ASSOCIATE Ophthalmic Medications

Alcon Laboratories is a multinational pharmaceutical company and a recognized industry leader in ophthalmic research. As a result of our continued growth, we are currently seeking an achievement-oriented Senior Clinical Research Associate. You will be working with clinical investigators to initiate and implement clinical studies for ophthalmic medications with responsibilities including the preparation of clinical protocols, clinical monitoring summaries and FDA submissions.

Minimum qualifications include a Ph.D. or MS in Physiology, Pharmacology, Chemistry or related field and 5 or more years clinical research experience involving drug development. Excellent interpersonal skills and highly developed technical writing abilities are also necessary.

This position offers an excellent opportunity for professional recognition and growth. We offer a competitive salary plus comprehensive benefits including company paid life/medical/dental/vision insurance and an excellent profit sharing plan. If our opportunity sounds like the kind of professional challenge you have been looking for, send your detailed resume with salary history, in strict confidence, to: **Sherry Rightmer, Employment Supervisor, Alcon Laboratories, Inc., P.O. Box 6600, Fort Worth, Texas 76115.**

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# Develop Desktop Medical Diagnostics

Imagine taking the capabilities of a hospital laboratory right to a patient's bedside. Or into the office of any doctor just about anywhere. New technology from Molecular Devices will do just that, merging microelectronics and biochemistry to create a powerful, portable medical diagnostic system.

The system has the potential to run most clinical assay procedures—even those requiring ultra-high sensitivity. It's designed for ease of use and delivers results in minutes instead of hours.

This Molecular Devices system uses our proprietary biosensor technology, one that promises to eventually allow measurement of molecular and cellular events directly. At that point, medical and pharmaceutical research will once again be revolutionized. Once again by Molecular Devices.

The opportunities for our system are such that DuPont obtained marketing rights for selected markets. So we have the technology, the business strategy, and the challenge to make the following opportunities well worth your investigation:

## **Immunoassay Development Chemist**

Your primary responsibilities will include reagent formulation and assay optimization. You will also be responsible for the analysis of biological samples, interfering substances, reagent stability and studies of assay precision and accuracy.

## **Development Biochemist**

Your main responsibilities include antibody screening and purification, conjugation to enzymes and/or other labels. Additionally, you will be responsible for the integration of assays with the biosensor system.

## **Development Microbiologist**

You will be responsible for developing immunoassays for a variety of microbial systems including sexually transmitted diseases. You will also be responsible for the screening of appropriate antibodies and/or other reagents for use in conjunction with the biosensor system.

All positions require a PhD or equivalent along with 5 years' demonstrated hands-on experience. Membrane or solid phase assay techniques desired.

Molecular Devices offers qualified candidates the opportunity to work on leading edge technology that combines microelectronics and biochemistry, as well as an excellent compensation and benefits package that includes equity participation. To apply, please send your resume in confidence to Professional Staffing, MOLECULAR DEVICES CORPORATION, 3180 Porter Drive, Palo Alto, CA 94304. An equal opportunity employer.



## POSITIONS OPEN

**BOTANIST/PLANT TAXONOMIST.** Tenure-track assistant professor (target level) starting fall 1988. Ph.D. required; university/college teaching experience and/or postdoctoral or curatorial experience preferred. Expectations of the position are to teach plant taxonomy, and courses in the University Studies Program, and to curate the Travis E. Brooks Regional Herbarium and develop an active research program. Applicants should send curriculum vitae, undergraduate and graduate transcripts, a brief statement of teaching philosophy and research interests, and three letters of recommendation to: **Dr. C. T. Train, Chairman, Department of Biology, Southeast Missouri State University, Cape Girardeau, MO 63701** by 15 January 1988. *Southeast Missouri State University is an Equal Opportunity/M/F/A Affirmative Action Employer.*

**CARDIAC ELECTROPHYSIOLOGIST.** A position is available for an M.D., D.V.M., or Ph.D. in physiology, biomedical engineering, or pharmacology to study ventricular fibrillation and defibrillation using a multi-channel cardiac mapping system. The individual will also teach graduate students and cardiology fellows to use this research technique. Rank, departmental affiliation and salary depend on education and experience. Send curriculum vitae to: **Dr. Raymond E. Ideker, Duke University Medical Center, Box 3140, Durham, NC 27710.** *Affirmative Action/Equal Opportunity Employer.*

**CELL BIOLOGIST.**—The Institute for Environmental Medicine of the University of Pennsylvania seeks a cell biologist for appointment as assistant professor. Successful candidate will establish an independent research program and will supervise a core electron microscopy laboratory. Research areas of special interest include lipid-protein interactions, endocytosis, secretion, and epithelial cell differentiation. Initial appointment will be on the research track in an academic department appropriate to interests of the candidates. Guaranteed salary support, a well-equipped laboratory and generous start-up funds are available. Deadline for applications is 15 January 1988. Send curriculum vitae, names of three references and statement of research interests to: **Cell Biology Search Committee, c/o Maureen Doran, Executive Assistant, Institute for Environmental Medicine, University of Pennsylvania, 14 John Morgan Building, 36th Street and Hamilton Walk, Philadelphia, PA 19104-6068.** *Equal Opportunity/Affirmative Action Employer.*

### CHAIR

The Department of Chemistry at the University of Iowa invites applications and nominations for the position of Professor and Chair. In addition to leadership and administrative abilities, candidates must have a distinguished, nationally recognized research program in chemistry. The Department currently consists of 25 faculty, several visiting and/or adjunct faculty, is well-equipped with modern instrumentation, and is housed in a building which is currently undergoing major remodeling. The Department has been targeted by the University for continued growth and development. Review of applications will begin 11 January 1988. Send curriculum vitae and a summary of research accomplishments to: **Professor H. B. Friedrich, Department Chair Search Committee, Department of Chemistry, University of Iowa, Iowa City, IA 52242.** *The University of Iowa is an Equal Opportunity/Affirmative Action Employer and is committed to increasing the participation by women and minorities on its faculty.*

New College, University of South Florida, **LEONARD S. FLORSHEIM CHAIR IN THE LIBERAL ARTS AND SCIENCES** beginning August 1988. Qualifications: national reputation in a liberal arts/sciences discipline; concerns across several fields; outstanding teaching record. Duties: excellent teaching, general contribution to the intellectual life of a small, highly selective honors college; involving gifted undergraduates in research. Salary, research support, travel provided by a million dollar endowment. Send nominations, applications and three recommendations before 15 January 1988 to: **Professor L. Deme, Chair, Florsheim Search Committee, c/o Provost's Office, New College, University of South Florida, Sarasota, FL 34243.** *Equal Opportunity/Affirmative Action.*

## POSITIONS OPEN

**CHAIR.**—Department of Entomology and Applied Ecology—Applications are invited for Professor and Chair, Department of Entomology and Applied Ecology, University of Delaware. We seek candidates who will continue superior achievement in research and who demonstrate commitment to quality undergraduate instruction and to cooperation in the development of an interdisciplinary Ph.D. program to augment a strong M.S. program. Research specialty is open, but should complement the goals of the department. Salary and fringe benefits are competitive. Committed to academic excellence, the University of Delaware is a mid-sized, comprehensive land grant institution with convenient access to major museum, USDA, and industrial research facilities. The position is available immediately; screening will begin 1 February 1988. The search will continue until the position is filled.

Send full curriculum vitae, including complete funding and publication record, and names, addresses, and telephone numbers of four references to: **Dr. Milton H. Statson, Search Committee Chair, School of Life and Health Sciences, University of Delaware, Newark, DE 19716.** *The University of Delaware is an Equal Opportunity/Affirmative Action Employer. Women and minorities are urged to apply.*

### CHAIRPERSON DEPARTMENT OF BOTANY IOWA STATE UNIVERSITY

The Department of Botany at Iowa State University invites nominations of, or applications from, outstanding scholars to lead this department of 19 faculty with broad interests in research and teaching and concentrations in physiology, systematics, and ecology. We are looking for a person with leadership and administrative skills, an outstanding research record, and a commitment to vigorous support of research and education. The successful candidate will have the opportunity to play a major role in the continuing development of this research-oriented department.

Closing date for applications is 20 January 1988, or until the position is filled. Applicants should send curriculum vitae, a list of publications, a statement of personal perspective on research and teaching at a major university, and the names of five references to: **Dr. Donald R. Farrar, Chairman of the Search Committee, Department of Botany, Iowa State University, Ames, IA 50011.**

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

### CIRCADIAN BIOLOGY UNIVERSITY OF VIRGINIA

The Department of Biology at the University of Virginia is forming a research group to investigate basic mechanisms of biological rhythmicity. **FACULTY POSITIONS** at the junior or senior level are now available. We seek applicants with research interests in circadian rhythmicity as well as expertise in a contemporary biological field such as neurobiology, molecular genetics, biochemistry, cell biology, or physiology. Successful applicants will combine outstanding research accomplishments or potential with ability to contribute to the intellectual life of a department dedicated to the highest level of undergraduate and graduate education. Please send curriculum vitae, including a description of research plans and three letters of reference by 1 February 1988, to: **Michael Menaker, Chairman, Department of Biology, Gilmer Hall, University of Virginia, Charlottesville, VA 22901.** *Equal Opportunity/Affirmative Action Employer.*

**DEAN, SCHOOL OF FOREST RESOURCES, NORTH CAROLINA STATE UNIVERSITY.** Administrative leader for a school offering internationally recognized programs with excellence in forestry, recreation, wood and paper science, and natural resources. Earned doctorate and appropriate academic and administrative experience required. The Dean will have a tenured position in an appropriate academic department. Nominations or applications (letter of interest, résumé, and names and addresses of at least three references) should be received by 15 January 1988 and addressed to: **Dr. Alfred D. Sullivan, Executive Secretary, Search Committee for Dean of Forest Resources, North Carolina State University, Box 7001, Raleigh, NC 27695-7001.**

## POSITIONS OPEN

### COMPUTER SIMULATION/TOXICOLOGY

Position available immediately for recent Ph.D. (or equivalent) to develop biologically based computer simulation models. Models currently under development include: physiologically based pharmacokinetics, biochemical mechanisms of toxicity, and chemical carcinogenesis. Solid background in chemistry/biochemistry/biology, with interest in applying these skills to computer simulation desired. Publication of all results and presentations at national meeting strongly encouraged.

Interested individuals should send curriculum vitae together with names and addresses of three references to:

**Ms. Lois Doncaster  
Human Resources  
Northrop Services, Inc.  
Environmental Sciences  
101 Woodman Drive, Suite 12  
Dayton, OH 45431**

*Northrop Services, Inc. is an Equal Opportunity Employer.*

The Women's Studies Program at The University of North Carolina at Chapel Hill seeks a **DIRECTOR** for a 5-year appointment, beginning 1 July 1988, with a tenured appointment in one of the departments in the College of Arts and Sciences. The rank is Full Professor or Chaired Professor, depending upon qualifications.

The major responsibilities will be to direct and administer the Women's Studies Program which offers undergraduate and graduate courses and an undergraduate degree in Women's Studies through the Interdisciplinary Studies B.A. degree; teach interdisciplinary Women's Studies courses and possibly courses in the faculty member's home department; coordinate activities that address women's issues; and initiate research and funding proposals. Qualifications for candidacy are the Ph.D. or equivalent; substantial publication in the candidate's discipline and in Women's Studies; administrative experience; at least 5 years of college teaching experience including WS courses; and demonstrated commitment to undergraduate education and women's issues.

Applications should include a letter of application, curriculum vitae, four letters of recommendation sent directly to the address below, and syllabi from courses taught. Send to: **Professor Beverly Long, c/o Ms. Denise Currin, College of Arts and Sciences, 3100 South Building, University of North Carolina, Chapel Hill, NC 27599.** The reviewing process will begin 1 December 1987. Applications should be received as soon as possible and no later than 5 January 1988.

*The University of North Carolina at Chapel Hill is an Affirmative Action/Equal Opportunity Employer.*

### DIRECTOR, CENTRAL ELECTRON MICROSCOPY FACILITY

The University of Connecticut Health Center seeks a director for its Central Electron Microscopy Facility. Candidates should be experienced in state-of-the-art electron microscopic techniques and should qualify for a faculty appointment at the Health Center. The director will be responsible for scheduling and operation of all instrumentation and services of the Facility; supervision of technical staff; consultation and collaboration with users of the Facility; and administration of the Facility's budget. Pursuit of an independent research program is expected. Faculty rank and salary will be commensurate with background and experience. Letters of application should include curriculum vitae and the names of three references. Applications should be received no later than 31 December 1987, and should be sent to:

**Dr. Douglas Oliver, Chairman  
Search Committee for Director of EM Facility  
Department of Anatomy  
The University of Connecticut Health Center  
Farmington, CT 06032**

*An Affirmative Action/Equal Opportunity Employer M/W/H.*

### ECONOMIC BOTANY POSTDOCTORAL POSITION

A 2-year study of the botany, ethnobotany, and utilization of plants in Amazonian Ecuador. Ph.D. required; knowledge of Spanish and previous experience in Latin America are essential. Send curriculum vitae plus names of three references to: **Dr. Michael J. Balick, Institute of Economic Botany, New York Botanical Garden, Bronx, NY 10458.** Detailed description of project available upon request. Closing date 15 December 1987. *Equal Opportunity/Affirmative Action Employer.*





## The Race is Hours!

*GENE-TRAK Systems, a joint venture between Integrated Genetics and AMOCO, is setting the pace as the leader in the commercialization of DNA probe-based products for diagnosing infectious diseases. We have an immediate need to fill the following positions:*

### DEVELOPMENT MANAGER

Position available to lead the Food Diagnostics Group in developing many assays. Will be responsible for product development and coordination with Manufacturing, QC, Marketing and Regulatory Affairs. Requires Ph. D. in food science or molecular biology with a minimum of 5 years of industrial experience. Candidates must have food microbiology experience; hybridization assay background preferred.

### PROJECT LEADERS

Positions exist for candidates proficient in assay development. Will be responsible for developing rapid nucleic acid based assays for the diagnosis of clinical and food tests.

### MOLECULAR BIOLOGISTS

Several positions available for developing DNA probe diagnostics. Candidates must have a BS/MS degree and post-graduate employment with experience in nucleic acid preparation and manipulation. Knowledge of infectious diseases is a plus.

*GENE-TRAK Systems, located in the suburbs of Boston, offers an attractive compensation and benefits package, which includes equity participation. For immediate consideration, send your resume to: Brian Mazar, Human Resource Manager, Dept. SG 11-20, GENE-TRAK Systems, 45 New York Avenue, Framingham, MA 01701.*

*An equal opportunity employer.*



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SYSTEMS**

## Improving the quality of life is our business.

### Scientific Computing

*The alleviation of pain and suffering. The enhancement of human health and longevity. In short, the improvement of the quality of life for people everywhere. That's our business at Glaxo, where we discover, develop, produce and market some of the world's most successful pharmaceutical products. It's what's made us the fastest-growing, research-oriented pharmaceutical firm in the United States, as well as the perfect environment for professionals whose ideals are as high as their level of talent.*

*If you share our philosophy, and you're qualified for the following opportunity, make it your business to join us.*

Glaxo's Research Team is seeking a Senior Systems Analyst to work closely with scientists to develop online applications. The qualified candidate will use RS/1 and relational database expertise to develop user friendly systems for the departments of Pharmacology, Biochemistry and Chemotherapy.

Background should include an advanced degree and 6-10 years' programming experience. Candidate should have a background in life sciences, strong analytical skills, programming proficiency, and VAX VMS experience. Good interpersonal and communications skills are required. RS/1, ORACLE, and C experience as well as pharmaceutical industry experience are desirable. Life Scientists with requisite analytical skills and computer science background are encouraged to apply.

Glaxo offers highly competitive salaries, outstanding advancement potential, and superior benefits, including a complete recreation and fitness program. For prompt consideration, please send your resume, including salary history, to: **Department 87-134E, Glaxo Inc., P.O. Box 13398, Research Triangle Park, NC 27709.** An Equal Opportunity Employer M/F/H/V. (No phone calls, please.) No private agency referrals, please.

# Glaxo Inc.

Working Toward a Healthier World

**NATIONAL CANCER INSTITUTE**  
**National Institutes of Health, Public Health Service**  
**CANCER PREVENTION FELLOWSHIP PROGRAM, CPFP**

The DIVISION OF CANCER PREVENTION AND CONTROL is accepting applications for CPFP. The primary purpose of this program is to attract individuals from a multiplicity of health science disciplines into the field of cancer prevention and control research. The program provides for: participation in DCPC Cancer Control Academic Program (a formal four-month course in cancer prevention and control); 20 months at NCI working directly with individual preceptors on ongoing cancer prevention and control projects and the NCI Year 2000 Goals; one year at a DCPC-approved cancer control program or State Health Department (may be optional). Funding permitting, up to 10 Fellows will be accepted for up to three years of training, beginning on August 28, 1988.

**APPLICANTS MUST (BY THE DEADLINE):** (1) Possess an M.D. or D.O. degree from an accredited medical school in the U.S., Puerto Rico, or Canada. (Foreign medical graduates—American citizens or Resident Aliens who have received their medical degree from a medical school outside the U.S., Puerto Rico and Canada and that is listed in the World Health Organization's *World Directory of Medical Schools*—must be certified by the Educational Commission for Foreign Medical Graduates [ECFMG]. Current certification, ECFMG or Foreign Medical Graduate Examination in the Medical Sciences [FMGEMS], is required for all foreign medical graduates.) Must have satisfactorily completed an internship (PGI) approved by the Council on Medical Education. (However, application will be accepted when internship is an integral part of medical school curriculum or incorporated as part of residency training.) —OR— Possess other accredited U.S., Puerto Rican, or Canadian doctoral degree (Ph.D., Dr. P.H., D.D.S., etc.) in a discipline related to cancer prevention and control research; biomedical, medical, nutritional, public health or behavioral sciences. (Foreign doctoral graduates must provide documented evidence that the foreign education is comparable to doctoral education received in accredited institutions noted above.); (2) Possess U.S. citizenship or be a resident alien eligible for citizenship within four years; (3) Complete and return the application packet by the deadline (including arranging for official academic transcripts and four, current, original letters of reference to be sent directly by the academic institutions and referees to the CPFP Coordinator).

For questions concerning the program's scientific or administrative aspects, please call Dr. David Poskanzer or Ms. Nancy Garner, respectively. Application packets may be obtained by sending a *POSTCARD* with your name and home address to **CPFP Coordinator, NIH/NCI/DCPC/CCAB, Blair Building, Room 4A05, 9000 Rockville Pike, Bethesda, MD 20892-4200**, or call (301) 427-8788. Please do not send any material until after you have read the instructions in the application packet.

**DEADLINE FOR RECEIPT OF APPLICATIONS: JANUARY 15, 1988**  
*(The NIH is an Equal Opportunity Employer)*

## **Research in Switzerland . . .**

Would you like to join an expanding research team in our multinational diagnostics company as a

### **RESEARCH SCIENTIST**

and contribute to new product developments in the field of cell surface antigens?

Candidates should have a Ph.D. degree with a strong background in immunology and monoclonal antibody development. Experience in immunological assay developments would be a distinct advantage.

Please send your C.V. to: Mrs. M. v. Anacker, Manager Human Resources.



## **Merz + Dade AG**

*CH-3186 Düringen, Switzerland*  
*Phone: (37) 43 91 11*

Nova Pharmaceutical Corporation, a leading research and development company in Baltimore, Maryland, is inviting applications for a position as scientist to work within its bradykinin antagonist program.



The successful candidate must possess a PhD or MD and a minimum of 3 years experience in the biological sciences. A molecular or physiological orientation is required.

Nova Pharmaceutical Corporation is an equal opportunity employer, offering a very competitive compensation, benefits package and a challenging work environment. Interested individuals should forward their CV and names of three references to:

**L. Faris**  
**Human Resources Department**  
**Nova Pharmaceutical Corporation**  
**RA-LS**  
**6200 Freeport Centre**  
**Baltimore, MD 21224-2788**

EOE M/F

## **BUILDING A NEW LAB?**

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SIMPLY WRITE US A LETTER STATING THE SPECIFICS ABOUT YOUR PROPOSED LAB AND WE WILL DO THE REST.

**WRITE TO:**

**SCIENCE MAGAZINE**  
**NEW LAB SERVICE DEPT.**  
**1515 BROADWAY**  
**NEW YORK, N.Y. 10036**

# IMMUNEX

IMMUNEX CORPORATION, a Seattle based biotechnology company in the forefront of research and development in immune regulation, has a number of positions open as a result of an expansion in our research activities. We are recruiting:

## **Staff Scientists, Post Doctoral Fellows and Research Assistants**

with experience and interest in the following areas:

### **Cytokine Biology**

Researchers at all levels are needed for development of small animal models of human diseases. Particular emphasis will be placed on *in vivo* assessment of recombinant cytokine activity in models of hematopoiesis, autoimmunity and immune deficiency.

### **Cytokine Receptors**

Individuals at all levels are needed for studies of cytokine receptor molecular biology and biochemistry. Expertise in exploring structure/function relationships by *in vitro* mutagenesis is welcomed.

### **Protease Function**

Applicants at all levels are required for assay development, biological assessment, cloning and expression of therapeutically important mammalian and microbial proteases.

### **Peptide Synthesis/Organic Chemistry**

Candidates at all levels are sought with interest in using peptide and organic synthesis to design inhibitors of protease action.

### **Cytokine Structure-Function: Molecular Modeling**

Scientists at all levels are required for exploration of cytokine structure and function by systematic *in vitro* mutagenesis coupled with high resolution x-ray diffraction analysis and molecular modeling.

### **Transgenic Animal Research**

Positions exist at all levels. Both molecular biologists and developmental biologists/embryologists are needed.

### **Hybridoma Research**

A *Senior Research Associate* position exists for an individual with an M.S. and 3-5 yrs. experience in the generation and characterization of monoclonal antibodies and development of immunologic assays.

Staff scientists candidates should hold a Ph.D./M.D. degree and possess significant post-doctoral experience demonstrating independent research skill and creativity and will have demonstrated an ability to work in a collaborative environment. Successful candidates for post-doctoral fellowship positions should have completed a Ph.D./M.D. degree and no more than two years post-doctoral training. Research assistants should possess a B.S./B.A. degree with a major in a life science discipline and 3-5 years' experience.

Immunex Corporation offers excellent opportunity for career development as well as competitive salaries and an excellent benefits package. For consideration, please submit c.v., names of three references, and a list of publications to:

**Immunex Corporation  
Human Resources Director  
51 University Street  
Seattle, WA 98101**

Immunex is an equal opportunity employer.

# RESEARCH SCIENTISTS

**San Francisco  
Bay Area**

BIO-RAD LABORATORIES is a worldwide leader in the fields of clinical diagnostics, chemical separations and analytical instrumentation. Our Clinical Diagnostics Division is continuing to expand its Research Group to undertake the development of new immunoassay systems for the 1990s. We are looking for motivated, goal-oriented professionals with expertise in the following fields:

### **CANCER IMMUNOLOGY**

This challenging opportunity requires a background in Immunology or Biochemistry and experience in the isolation and characterization of tumor associated antigens.

### **MICROBIOLOGY**

This position requires experience in the isolation, characterization and detection of infectious disease antigens in clinical specimens. A MS/PhD in Microbiology or equivalent experience is required.

### **HYBRIDOMA DEVELOPMENT**

Hands-on expert with at least 3 years' hybridoma experience, preferably in an industrial cell culture laboratory.

### **INSTRUMENTATION ENGINEERING**

Five or more years' experience as a senior project engineer coordinating both mechanical and electronic engineering of instruments. Demonstrated ability to work in a multidisciplinary environment. Strong communication skills are required.

### **IMMUNOASSAY DEVELOPMENT**

A background in automated immunoassay desirable. Strong communication and leadership skills essential. Requires an MS/PhD in microbiology or biochemistry.

### **RESEARCH AND DEVELOPMENT MANAGER**

Five or more years' experience in diagnostics with at least 3 years of project management. Excellent people skills and the demonstrated ability to manage multidisciplinary teams are essential.

In these positions you will be working in a multidisciplinary environment where you can enjoy the freedom to explore new technologies. Career growth and recognition of accomplishment are offered. Interaction with the scientific community through publication and meeting attendance is encouraged.

**Be part of the team in our new facilities overlooking the Bay in Hercules, California.**

For consideration, please submit resume to Bio-Rad Laboratories, Human Resources, Dept. #293-1120S, 1000 Alfred Nobel Drive, Hercules, CA 94547. EOE.

**BIO-RAD** Bio-Rad Laboratories

## POSITIONS OPEN

### ECOSYSTEM BIOLOGIST/ LANDSCAPE ECOLOGIST

The Department of General Science at Oregon State University invites applications for a full-time (fixed term) appointment at the assistant professor (senior research) level beginning as soon as February 1988. Applicants must have a Ph.D. in ecological sciences with broad, interdisciplinary research interests and a desire to focus on the ecological effects of global climatic change. Postdoctoral experience is desirable. Closing date is 1 January 1988. Send letter of application, curriculum vitae, and names, addresses, and telephone numbers of four references to: **Dr. Paul Farber, Department of General Science, Oregon State University, Corvallis, OR 97331.** *Oregon State University is an Affirmative Action/Equal Opportunity Employer. Oregon State University has a policy of being responsive to the needs of dual-career couples.*

### ENVIRONMENTAL HEALTH SUPERVISOR

Indiana University of Pennsylvania invites applications for a tenure-track position at the assistant/associate professor level to begin September 1988.

**Qualifications:** Earned doctorate in an environmental health-related field and professional field experience in environmental health. Certification by American Academy of Sanitarians or corresponding professional board is desirable.

**Duties:** Primary responsibilities will be to direct an undergraduate environmental health program that emphasizes a strong basic science background, teach courses in epidemiology and environmental protection, advise majors within the program, work closely with various health agencies, institutions, and industry to develop internship sites, prepare and coordinate application for accreditation of program; would also be expected to participate in general department course offerings and conduct research in area of expertise. Department is committed to quality teaching and research.

Send letter of application, résumé, transcripts, and three letters of recommendation to: **Dr. J. G. Humphreys, Search Committee Chairman, Biology Department, Indiana University of Pennsylvania, Indiana, PA 15705. Telephone: 412-357-2632.** Deadline for receipt of application is 15 January 1987. *Minority applicants are encouraged to apply. IUP is an Affirmative Action/Equal Opportunity Employer.*

**ENZYMOLOGIST:** Applications are invited for a tenure-track faculty position at the assistant or associate professor level. We are seeking an applicant with a primary research interest in enzymology. In addition to protein sequencing and oligonucleotide synthesis facilities, the Department of Biochemistry has instrumentation for circular dichroism, lifetime and steady-state fluorescence, rapid reaction kinetics, and scanning calorimetry. All current faculty members have active, funded research programs. Applicants should send curriculum vitae, a description of research interests, and three letters of reference to: **Dr. Mark Olson, Search Committee, Department of Biochemistry, The University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216-4505.** Closing date: 15 January 1988. *Equal Opportunity Employer, M/F/H/V.*

### FACULTY POSITION

The Department of Anatomy and Neurobiology, invites applications from individuals with experience in human and/or veterinary anatomy for a tenure-track position at the assistant/associate professor level. The successful candidate will have demonstrated abilities to:

- 1) develop a high-quality extramurally-funded research program;
- 2) participate in departmental graduate student training program;
- 3) develop expertise for eventual involvement in the Professional Veterinary Medical teaching program.

Priority will be given to candidates with research interest in cellular neurobiology. Salary and rank will be commensurate with qualifications and experience. Candidates should have an advanced degree in anatomical science or neurobiology.

Applicants should send a letter stating professional goals, curriculum vitae and the names of three references to: **Dr. Stephen D. Roper, Ph.D., Chairman, Department of Anatomy and Neurobiology, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, CO 80523.** The application deadline is 18 December 1987.

*Colorado State University is an Equal Opportunity Employer and complies with Title IX requirements.*

## POSITIONS OPEN

**EVOLUTIONARY BIOLOGY:** State University of New York at Stony Brook: We invite applications for a tenure-track position in theoretical evolutionary biology, from candidates with strength in mathematical aspects of population or quantitative genetics, ESS approaches, or other theoretical approaches to evolutionary processes. Theorists who are also conducting an active empirical research program are particularly encouraged to apply. Teaching responsibilities include graduate and undergraduate instruction in relevant courses. We expect the appointment, in fall 1988, to be at the **ASSISTANT PROFESSOR** level, but appointment at a higher level may be possible. Please send statement of interests, curriculum vitae, and reprints of publications, and have three letters of recommendations sent by 15 December 1987, to: **Dr. Douglas J. Futuyma, Search Committee, Department of Ecology and Evolution, SUNY Stony Brook, Stony Brook, NY 11794-5245.** *SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer. AK#284.*

### FACULTY POSITION DEPARTMENT OF ENGINEERING AND POLICY SCHOOL OF ENGINEERING AND APPLIED SCIENCE WASHINGTON UNIVERSITY, ST. LOUIS

The Department of Engineering and Policy at Washington University in St. Louis invites applications and nominations for a tenure-track faculty position, starting in fall 1988. A doctoral degree in engineering or physical science and a demonstrated potential for external research support are required. Responsibilities include teaching graduate and undergraduate courses, supervising graduate student research, and developing a strong, externally-supported, research program. Specialization areas in the department include energy, environment, international development, public health, and science and technology policy at the domestic and international levels. Emerging areas include strategic management of technology and technological innovation, R&D management, and manufacturing engineering. Applicants who qualify for a senior-level appointment as the result of academic or recent industrial experience or government service are especially encouraged. Applications and nominations will be accepted until the position is filled. They should include the names, addresses, and telephone numbers of three references, and be sent to: **Dr. William P. Darby, Chairman, Department of Engineering and Policy, Campus Box 1106, Washington University, One Brookings Drive, St. Louis, MO 63130.** *Washington University is an Affirmative Action/Equal Opportunity Employer.*

### FACULTY POSITION DEPARTMENT OF MOLECULAR GENETICS AND CELL BIOLOGY

The Department of Molecular Genetics and Cell Biology at The University of Chicago is seeking candidates for tenure-track appointments in the areas of cell biology, developmental genetics, and virology. We are particularly interested in candidates at the assistant professor level who have sufficient research experience to demonstrate both significant accomplishment and outstanding promise. Please send curriculum vitae, bibliography, a statement of past and future research interests, and the names of three references to: **Dr. Edwin Taylor, Department of MGC, The University of Chicago, 920 East 58th Street, Chicago, IL 60637.** Deadline, 11 December 1987. *The University of Chicago is an Affirmative Action/Equal Opportunity Employer.*

As part of its continuing reorganization and modernization, the Department of Anatomical Sciences and Neurobiology at the University of Louisville is recruiting for several new **FACULTY AND POSTDOCTORAL POSITIONS** in developmental neuroscience. Individuals whose research utilizes cellular and molecular approaches will be given preference. Faculty applicants will be expected to participate in teaching neuro or micro anatomy, and should have evidence of a vigorous research program. Rank and salary to be commensurate with qualifications and experience. Four letters of recommendation are required: Contact: **Dr. Fred J. Roisen, Chairman, Department of Anatomical Sciences and Neurobiology, University of Louisville, School of Medicine, Louisville, KY 40292** by 15 December 1987.

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

## POSITIONS OPEN

### FACULTY POSITION IN CELL/DEVELOPMENTAL BIOLOGY

Applications are invited for a tenure-track position in the Department of Biological Sciences at Carnegie Mellon University. Applicants must be strongly motivated toward carrying out research in cell and/or developmental biology. Candidates who are just completing their postdoctoral research training will be considered for a position of starting assistant professor; exceptionally well-qualified individuals may be considered for appointment at a higher level. To apply, send curriculum vitae and a concise description of research interests (no more than three pages) and, in addition, have three letters of recommendation sent to: **Dr. Susan Henry, Head, Department of Biological Sciences, Carnegie Mellon University, 4400 Fifth Avenue, Pittsburgh, PA 15213.** *Carnegie Mellon University is an Equal Opportunity/Affirmative Action Employer.*

### NORTH CAROLINA STATE UNIVERSITY FACULTY POSITIONS DEPARTMENT OF BIOCHEMISTRY

New tenure-track research/teaching faculty positions at the rank of assistant professor are available with a starting date of 1 July 1988. Expansion of the Department of Biochemistry over the next 5 years is being undertaken as a part of the campus-wide biotechnology effort. The Department of Biochemistry is within the School of Agriculture and Life Sciences, and represents a joint program with the School of Physical and Mathematical Sciences. Applicants may apply from many areas of biochemistry such as structural biology of nucleic acids and proteins; regulation of gene expression in plants or animals; membrane structure and intracellular transport; cellular metabolism of plants or animals; toxicology-neurobiochemistry; and bioinorganic chemistry. Attractive salaries commensurate with experience, generous laboratory space, and support for equipment and supplies are available. Biochemistry degrees offered include the B.S., M.S., and Ph.D. North Carolina State University, as one of the Research Triangle Universities, provides a rich environment for collaborative interactions with Duke University and the University of North Carolina at Chapel Hill, as well as institutions in the Research Triangle Park.

Applications, including a detailed curriculum vitae, a brief description of research interest, and names and addresses of three references, will be accepted until 15 February 1988, or until suitable applicants are identified.

**Chairman, Search Committee  
Department of Biochemistry  
Box 7622**

**North Carolina State University  
Raleigh, NC 27695-7622**

*North Carolina State University is an Affirmative Action/Equal Opportunity Employer. Proper documentation of identity and employability will be required before the hiring process can be finalized.*

### FACULTY POSITIONS IN IMMUNOLOGY AND VERTEBRATE PHYSIOLOGY

The Department of Biological Science, California State University, Fullerton, invites applications for two tenure-track appointments (preferably at the assistant or associate level), one in immunology, the other in vertebrate physiology, to begin fall 1988. Qualifications include a Ph.D. and appropriate research experience. The candidates will be expected to participate in undergraduate and graduate courses, and to establish an independent, productive research program.

The successful immunology candidate will be working in modern aspects of cellular immunology. Expertise in immunogenetics and experimental oncology is desired.

For the vertebrate physiology position, preference will be given to individuals working at the cellular or molecular levels. Teaching will be expected at the organismic and cellular levels.

Applicants should submit: curriculum vitae, title page/abstracts from recent papers, and brief statements of teaching and research interests and plans. Additionally, three letters of recommendation should be forwarded separately to: **Physiology Search Committee or Immunology Search Committee, Department of Biological Science, California State University, Fullerton, CA 92634.** Deadline for receipt of applications is 1 February 1988. *The University is an Affirmative Action/Equal Opportunity Employer and encourages applications from women and minority candidates.*

## POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY OF REGULATED SECRETION

Postdoctoral (staff fellowship) position is available for a recent Ph.D., molecular biologist interested in studying receptor mediated regulation of gene expression in secretory systems. Applicants should have a good background in eukaryotic recombinant DNA techniques. Our main interest is in cloning and sequencing of gene products whose expression is regulated during the secretion process by the activation of adrenergic and cholinergic receptors. Salary: \$20,000 to 28,000 per year, depending on experience. Applicants should submit their curriculum vitae, bibliography and the names of three references to Dr. Eleni Kousvelari, Clinical Investigations Section, National Institute of Dental Research, National Institutes of Health, Building 10, Room 1A-19, 9000 Rockville Pike, Bethesda, MD 20892.

AN EQUAL OPPORTUNITY EMPLOYER

## Scientist Molecular Oncology/Tumor Biology Genentech, Inc.

The Department of Pharmacological Sciences has an immediate opening for an individual with a strong background in molecular biology and oncology, and an interest in studying basic mechanisms of tumor progression in vivo.

Qualified applicants should possess the following:

- PhD in Molecular and Cellular Biology with 3-5 years of postdoctoral experience.
- Research background in one or more of the following areas: growth factor-receptor interactions and signal transduction; the molecular

biology of transformation or mechanisms controlling cellular proliferation; mechanisms of resistance of tumor cells to chemotherapeutic agents or components of the immune system.

- Experience in the use of murine tumor models will be considered an advantage.

Please send your CV and letter of interest to: Dr. Michael Shepard, Department of Pharmacological Sciences, Genentech, Inc., 460 Point San Bruno Boulevard, South San Francisco, CA 94080. An equal opportunity employer.

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### The RAND Graduate School (RGS)

Invites applications for its doctoral degree program in policy analysis. Deadline for submitting applications for 1988-1989 is February 1, 1988. RGS, which is fully accredited by the Western Association of Schools and Colleges, is an integral part of The RAND Corporation. Its curriculum consists of multidisciplinary course work, combined with on-the-job training (OJT), leading to the dissertation and award of the Ph.D. in Policy Analysis. Students receive OJT support equivalent to doctoral fellowships. Fellowships are also available for applicants with special interests in health policy or Soviet international behavior. A master's degree, or equivalent post-bachelor's degree training and experience, is required for admission.

For additional information  
send for bulletin:

The RAND Graduate School, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138, or telephone: 213-393-0411.

The RAND Corporation is an  
Equal Opportunity/Affirmative Action employer

## Research Scientists Experimental Immunology

**Amgen**, a leading biotechnology company with a broad technical base, is seeking **Research Scientists**. Qualified candidates will have a Ph.D or M.D. degree and at least two years of post doctoral or equivalent experience involving a range of immunological methodologies. Positions are also available for experienced **Research Associates** having a Master's degree and a strong background in relevant research. **Amgen** currently has several major programs addressing the biological roles of **Human Lymphokines** and **Cytokines**. Our advances in this area have made us a leader in the field of **Biological Response Modifiers**.

**Amgen's** research efforts involve the identification, isolation, development and application of new medical therapeutics utilizing recombinant DNA and hybridoma technologies.

**Amgen** offers a stimulating research environment and maintains a close association with academic institutions through research collaborations and its Scientific Advisory Board.

**Amgen** offers an excellent salary and benefits package as well as equity participation. Applications including a curriculum vitae and the names of three references should be sent to:

Recruitment, Dept. #25  
**AMGEN**  
1900 Oak Terrace Lane  
Thousand Oaks  
CA 91320

Equal Opportunity Employer





## POSITIONS OPEN

### FACULTY POSITION IN VERTEBRATE PHYSIOLOGY

Biology, vertebrate physiology, tenure-track, assistant professor. Must have Ph.D. by 1 September 1988. Teaching areas include human anatomy and physiology, vertebrate physiology, and toxicology; coordination of A&P labs. Successful candidate is expected to maintain productive research program and to direct graduate student training at master's level. Application deadline is 10 January 1988. Curriculum vitae, relevant publications, graduate and undergraduate transcripts, and names, addresses, and telephone numbers of at least three references should be forwarded to: **Dr. Caroline P. Benjamin, Chair, Search and Screen Committee, Department of Biology, Southwest Texas State University, San Marcos, TX 78666.** The University reserves the right not to proceed with any appointment for financial or programmatic reasons. *Southwest Texas State University is an Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITIONS IN NEUROBIOLOGY

The Department of Biological Sciences, Purdue University, invites applications for two tenure-track faculty appointments in general area of neurobiology. Candidates in any of the following areas of specialty are invited to apply: cellular neuroendocrinology, developmental neurobiology, electrophysiology, genetic neurobiology, immunoneurobiology, membrane biophysics, molecular neurobiology, neurochemistry, neurocytology, or visual physiology. Individuals working at the cellular or molecular level using modern techniques are especially welcome. Although seeking primarily candidates at assistant professor level, will consider appointments at senior levels for those with outstanding credentials. Candidates must have a strong research record and are expected to develop vigorous research program and to engage in teaching physiology or neurobiology. Send curriculum vitae, list of publications, statement of research interests, and names of at least three references by 1 January 1988 to: **Dr. William L. Pak, Convener, Neurobiology Search Committee, Department of Biological Sciences, Purdue University, West Lafayette, IN 47907.** *Equal Opportunity/Affirmative Action Employer.*

**FULL OR ASSOCIATE PROFESSOR (TENURE-TRACK) IN HEALTH SCIENCE.** Available September 1988. Serve as Chair of the Health Science Department with administrative duties such as class scheduling, staffing, personnel evaluation, and program coordinator. In addition, teach graduate and undergraduate courses in health science, engage in scholarly activities, advise students, serve on committees, and participate in other activities as appropriate. Salary range: \$34,740 to \$52,968 for the academic year, depending on qualifications and experience. A doctorate in public health, health education or closely related field plus administrative experience is required. Applications will be accepted until the position is filled but will not close prior to 1 March 1988. Send application, curriculum vitae, three letters of recommendation, and all transcripts to:

**Sandra K. Cross, Ed.D., Chair, Search Committee  
Department of Health Science  
California State University  
550 University Parkway  
San Bernardino, CA 92407**

*An Equal Opportunity/Affirmative Action, Section 504 Title IX Employer.*



### GYNECOLOGIC ONCOLOGIST

Entry-level position for Board-eligible or Board-certified candidate, who has completed a certified program in gynecologic oncology, and has basic research experience in molecular biology. A strong commitment to teaching, clinical care and research should exist.

Interested candidates should send curriculum vitae to:

**Kenneth D. Hatch, M.D.  
Director, Division GYN/Oncology  
University of Alabama Medical Center  
OHB 550 University Station  
Birmingham, AL 35294**

*An Affirmative Action/Equal Opportunity Employer*

## POSITIONS OPEN

**FACULTY POSITIONS: BIOCHEMISTRY/MOLECULAR BIOLOGY.** Applications are invited for two positions as assistant professor. Candidates must have a Ph.D., postdoctoral experience, and a plan for an independent research program. Positions involve teaching at undergraduate, graduate, and medical school levels. Send curriculum vitae and references to: **Chairman, Search Committee, Department of Biochemistry, Science Research Building, North Texas State University, Denton, TX 76203.** *NTSU/TCOM is an Equal Opportunity Affirmative Action Employer.*

**GENETICS AND DEVELOPMENTAL BIOLOGY:** The Biology Department seeks candidates for 1-year, nonrenewable appointment September 1988, to teach core courses in genetics and development, as well as participate in a team-taught introductory biology course. Send curriculum vitae, statement of research activity, and three letters of recommendation to: **Professor John L. Howland, Department of Biology, Bowdoin College, Brunswick, ME 04011** by 14 December 1987. *Bowdoin College is committed to Equal Opportunity through Affirmative Action.*

### HEAD DEPARTMENT OF CHEMISTRY

Applications and nominations are invited for the position of Professor and Head of the Department of Chemistry at Kansas State University. We seek an outstanding individual who now conducts and will maintain a nationally recognized research program, possesses strong leadership and administrative capabilities, will actively seek and develop new sources of funding for departmental programs, and is dedicated to excellence in teaching and research. Review of applications will begin 15 January 1988. Applicants should send curriculum vitae and list of publications; a summary of research accomplishments and record of recent research funding; a statement of scientific goals; and the names, addresses, and telephone numbers of at least three references to: **Professor M. Dale Hawley, Department of Chemistry, Willard Hall, Kansas State University, Manhattan, KS 66506.** *Kansas State University is an Affirmative Action/Equal Opportunity Employer. Women and members of minority groups are encouraged to apply.*

### HEAD OF SCIENTIFIC SECTIONS ILLINOIS STATE MUSEUM

The ISM seeks a Ph.D. in a natural science or anthropology field with administrative experience to serve as its Head of Science Sections (Anthropology, Botany, Geology, and Zoology). Position will be at an assistant director level and administer a staff of 40 scientific curators, research associates, and technicians, including 14 Ph.D's. Candidates should have administrative experience in a science museum, university, or comparable scientific program. Preference given to candidates with solid publication record, experience with collections, and strong interdisciplinary and paleoecological background.

Salary \$45,000 to \$55,000. Reply with curriculum vitae and names of references by 15 December 1987 to: **Dr. R. Bruce McMillan, Museum Director, Illinois State Museum, Springfield, IL 62706.** *Equal Opportunity Employer/Affirmative Action Employer.*

### FLORIDA INTERNATIONAL UNIVERSITY THE STATE UNIVERSITY OF FLORIDA AT MIAMI HYDROGEOLOGIST AQUEOUS GEOCHEMIST

The Department of Geology at Florida International University invites applications for a full-time tenure-earning position at the assistant professor level in hydrogeology/aqueous geochemistry. The successful applicant will be expected to teach at the undergraduate and graduate levels, and must demonstrate an ability to conduct high quality teaching, and the potential to establish a vigorous research program. A completed Ph.D. is required. The department is well-equipped, and includes an ARL Microprobe, ICPS, x-ray diffraction, etc. Deadline for applications: 8 December 1987. Appointment will begin in January 1988. Send a brief résumé, brief description of teaching and research interests, transcripts, and three letters of recommendation to **Dr. Florentin Maurasse, Department of Geology, Florida International University, University Park, Miami, FL 33199.** *Florida International University is a member of the State University System of Florida, and is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**IMMUNOLOGIST:** The Biology Department invites applications for a tenure-track assistant professorship in immunology beginning 15 September 1988. Candidates should have at least 2 years of postdoctoral experience; teaching experience is also desirable. He/she will be expected to establish a vigorous research program and pursue funding for it. Teaching responsibilities include participation in the Biology Major's and/or non-major's introductory sequences, undergraduate and graduate courses in immunology, and the training of M.S. and Ph.D. students. Applicants should submit: curriculum vitae, list of publications and reprints, a statement of current and projected research and teaching interests, and arrange to have three letters of recommendation sent to: **Dr. Robert Bast, Biology Department, Cleveland State University, East 24th and Euclid Avenue, Cleveland, OH 44115** by 1 February 1988. *Cleveland State University is an Equal Opportunity/Affirmative Action Employer and encourages applications from qualified minority groups and women.*

**IMMUNOLOGIST.** Tenure-track, assistant professor; Ph.D. in immunology or microbiology. Postdoctoral experience preferred. Duties include teaching immunology and virology as well as assisting in a general microbiology course. The successful candidate will be expected to develop an externally-funded research program in immunology and to participate in an M.S. graduate program. Send a statement of research interests, curriculum vitae, and three letters of recommendation by 4 January 1988 to: **Dr. Douglas Wartzok, Department of Biological Sciences, Indiana University-Purdue University at Fort Wayne, Fort Wayne, IN 46805-1499.** *An Affirmative Action/Equal Opportunity Employer.*

**IMMUNOLOGIST/VIROLOGIST: OHIO UNIVERSITY.** The Department of Zoological and Biomedical Sciences seeks to fill a tenure-track position for a research-oriented assistant or associate professor to begin 1 September 1988. The applicant must have a Ph.D. and postdoctoral experience. Teaching responsibilities include participation in the undergraduate, graduate and medical school curricula. Send letter of application, curriculum vitae, description of current and future research plans, copies of representative publications, statement of teaching experience and three letters of recommendation by 30 January 1988 to: **Dr. Malcolm Modrzakowski, Search Committee Chair, Department of Zoological and Biomedical Sciences, Irvine Hall, Ohio University, Athens, OH 45701.**

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

**IMMUNOLOGY/CELL CULTURE TECHNOLOGISTS, INFECTIOUS DISEASES:** Beth Israel Medical Center, a major Manhattan teaching hospital affiliated with Mount Sinai School of Medicine seeks two immunology/cell culture technologists for research laboratory. EIA, RIA, IFA, and cell culture. Excellent salary and benefits. Send résumé to: **Human Resources Department, Beth Israel Medical Center, First Avenue at East 16th Street, New York, NY 10003.** *An Equal Opportunity Employer.*

### INSTRUCTOR

Design and conduct experiments on the development of gonadal function in neonatal animals. Experimental protocols include cell culture of Leydoli, Leydig, granulosa and theca interna cells. Experience in molecular biology techniques, especially for expression of gonadal growth factors, is essential. Must have a Ph.D. in chemistry or biochemistry and postdoctoral training in reproductive endocrinology. Forty hours per week; \$22,000 per year. Apply at: **Tennessee Job Service, 1295 Poplar Avenue, Memphis, TN 38104.** Attention: **Mr. Jack Hilzheim.**

**INVERTEBRATE ZOOLOGIST:** Biology Department of Ithaca College seeks a Ph.D. for a tenure-eligible position, at the level of assistant/associate professor, starting August 1988, to teach invertebrate zoology and general biology and develop a research program involving undergraduates. The department already has a *Drosophila* geneticist and an aquatic ecologist studying fish predation on invertebrates and is seeking applicants in other areas of expertise. Send curriculum vitae and three letters of recommendation that must specifically address teaching and research potential by 8 January 1988. **Biology Search Committee, Biology Department, Ithaca College, Ithaca, NY 14850.** *Ithaca College is an Affirmative Action/Equal Opportunity Employer.*

## CONGRESSIONAL SCIENCE AND ENGINEERING FELLOWSHIPS

### Applications Invited

The American Association for the Advancement of Science (AAAS) invites applications for two one-year Congressional Science and Engineering Fellowships it will offer for the period beginning 1 September 1988. The Fellowship Program provides an opportunity for accomplished and societally aware postdoctoral to mid-career scientists and engineers to participate in and contribute to the public policy-making processes within the Congress. Fellows work as special legislative assistants within the congressional staff system.

Persons may apply from any physical, biological, or behavioral science or any field of engineering. The term "science" is used broadly to include the system sciences, public health, and other technical professions. In addition to the fellowships awarded by the AAAS, about 15 others are given by other participating professional societies. The AAAS runs a year-long educational program for both its own Congressional Science and Engineering Fellows and those selected by the participating societies. Addresses of all participating societies are available from the address listed below.

The 1987-88 AAAS Congressional Science and Engineering Fellows will receive a stipend of \$26,500; an additional \$1,500 is available for relocation expenses and travel in connection with the Program.

In order to obtain detailed information on the Program and specific application requirements, write:

**Congressional Science and Engineering Fellows Program  
American Association for the Advancement of Science  
1333 H Street, NW  
Washington, DC 20005**

The deadline for submission of application materials is 15 January 1988. The award will be announced around 1 May 1988.

## Biotechnology Research and Development

Pandex, a division of Baxter Healthcare Corporation is developing state-of-the-art products for medical diagnostics.

We are expanding our R&D group and are seeking creative Ph.D.-level scientists interested in positions that offer challenging opportunities for professional career growth. Our Immunodiagnostics Department currently has key positions available in Assay Development. The successful candidates will have 2-4 years postdoctoral experience in immunoassay development, with a strong background in animal/human virology, immunology, biochemistry or related field and have a desire to perform bench research. Industrial product development experience in infectious disease antigens or antibodies is preferred. Excellent written and oral communication skills are essential.

If you would like to be considered, please send your resume in confidence to: **Anne McNicholl, Personnel Director, Baxter Healthcare Corporation, Pandex Division, 909 Orchard Street, Mundelein, IL 60060.** We are an equal opportunity employer.

Pandex Division

**Baxter**

## GRADUATE TRAINING PROGRAM IN MOLECULAR AND CELL BIOLOGY

### Texas A&M University

Graduate research fellowships are available for an inter-disciplinary molecular and cell biology program (MCBP). Participating departments in the Colleges of Agriculture, Medicine, Science and Veterinary Medicine offer degrees in their respective areas.

Texas A&M has assembled an outstanding faculty studying a number of exciting areas of cell and molecular biology in both eukaryotic and prokaryotic systems. The program is highly interactive with state-of-the-art laboratories and ancillary facilities. The MCBP offers a comprehensive core curriculum including modular courses in molecular and cell biology. More specialized and intensive training is available in techniques for DNA sequencing, plant gene transfer, animal embryo microinjection and implantation, hybridomas and electron microscopy. Additional components of the graduate program include weekly journal clubs, seminar programs, guest lecture series and an annual scientific research conference featuring nationally prominent speakers.

Outstanding students are encouraged to apply for graduate research fellowships with multi-year stipends of approximately \$1000 per month. Additional funds are available for travel to scientific meetings, and in special cases, funds will be provided for short training courses off campus.

For additional information, contact:

**Director, Molecular and Cell Biology Program, Texas A&M University, P.O. Drawer E6, College Station, TX 77844. Phone: Dr. Terry L. Thomas, (409) 845-0184**

*Texas A&M University is an equal opportunity employer*

## POSITIONS OPEN

### LABORATORY DIRECTOR

Biotherapeutics Inc., a healthcare service company, contracts with suitable cancer patients to perform laboratory research services designed to develop custom-tailored biotherapeutic options.

With expansion plans for a national network of laboratories, the company seeks qualified individuals to serve as Laboratory Directors. Candidates should have a proven track record in research with specific expertise in tumor cell biology or cellular immunology. Administrative and managerial experience is preferred. Specific responsibilities will include planning, developing, and administration of the laboratory; and coordination of basic and contract-related research.

Send résumé and salary requirements to:

Personnel Department  
Biotherapeutics Inc.  
P.O. Box 1676  
Franklin, TN 37064-1676

### PRIMATE INFORMATION CENTER

The Washington Regional Primate Research Center seeks a **MANAGER/RESEARCH LITERATURE ANALYST** for the Primate Information Center, an international research-literature indexing service that provides bibliographies on all scientific aspects of primatology from the world's most comprehensive computerized primatological index.

Managerial experience and academic degree in a biological science, e.g., microbiology, physiology, molecular biology, required; advanced degree with experience in such areas as scientific indexing/abstracting, editing, biomedical research with nonhuman primates, and/or computerized records desirable. Send curriculum vitae by 4 December 1987 to:

Douglas M. Bowden, M.D., Associate Director  
Regional Primate Research Center SJ-50  
University of Washington  
Seattle, WA 98195

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

The U.S. Department of Agriculture, Agricultural Research Service, is seeking applications for two postdoctoral positions, **MICROBIOLOGIST/MOLECULAR BIOLOGIST**, for the National Animal Disease Center, Brucellosis Research Unit, in Ames, Iowa. The positions are temporary, full-time, not to exceed 1 year. Responsibilities include the application of recombinant DNA technology and isolation and characterization of *Brucella* proteins and lipopolysaccharides for use in the development of improved subunit vaccines and diagnostic tests for bovine brucellosis.

Salary is commensurate with experience (\$27,172 to \$42,341). For program and position information, contact: **Dr. George Lambert on 515-239-8204**. For information on application procedures/forms, contact: **Janie Carr on 301-344-2756**. Applications in response to this ad should be marked 8N001. Applications must be received no later than 31 December 1987.

Mail applications to:

Janie Carr, USDA-ARS-PD  
Personnel Operations Branch  
Northern Section  
Building 419, BARC-East  
Beltsville, MD 20705

*An Equal Opportunity Employer*

**MOLECULAR BIOLOGISTS/PATHOLOGISTS.** Junior and senior tenure-track positions available for research-oriented individuals. Successful applicants must possess the M.D. or Ph.D. degrees, and will be expected to establish independent research programs meriting extramural support. Teaching responsibilities are modest, and involve both medical and graduate education. Junior candidates must have at least 2 years of postdoctoral research experience, with evidence of outstanding research potential in molecular or cellular biology. Senior candidates must have an established record of research excellence with extramural funding support. Excellent laboratory facilities, together with necessary start-up funds, are available. Individuals should submit curriculum vitae, a statement of professional goals, and the names of three references to: **Dr. William F. Wiloughby, Chairman, Department of Pathology, University of South Carolina, School of Medicine, Columbia, SC 29208.** *The University of South Carolina is an Equal Opportunity/Affirmative Action Employer.*

SYDNEY, AUSTRALIA

## FOUNDATION DIRECTOR

For

### HEART RESEARCH INSTITUTE A NEW INSTITUTE FOR THE STUDY OF ATHEROSCLEROTIC DISEASE

The Board of Governors wishes to appoint a Foundation Institute Director commencing after July, 1988 and in the interim to advise on its planning.

Expressions of interest in the appointment are invited from scientists strongly motivated to the prevention and alleviation of atherosclerotic disease through basic research into its causes and mechanisms. The Director is expected to initiate a research programme and recruit the necessary scientific and supporting staff.

The Heart Research Institute is an Australian Bicentennial initiative of the National Heart Foundation of Australia. It is independently governed by its own Board of Directors, but is assured of strong links with the University of Sydney and the Royal Prince Alfred Hospital in whose campus it is to be located. A building has been allocated and provisional plans have been drawn up for its modification to enable the initial employment of some twenty four research scientists plus ancillary staff. The site allows major further development.

The Board recognises that the success of the Institute will depend upon the ability, experience, enthusiasm and scientific renown of the Foundation Director. The Board will negotiate stipend, facilities and other conditions accordingly.

Pending the appointment of the Director, the Board is advised on scientific matters by an international panel named in an amplified statement available from the undersigned.

Alan W Coates, AO Chairman, Board of Governors, Room 508B, Building 82, Royal Prince Alfred Hospital Missenden Road, Camperdown NSW 2050 Australia. Fax 61 2 516 6133. Inquiries should be made by December 11, 1987.

## POSTDOCTORAL POSITIONS NATIONAL INSTITUTES OF HEALTH

**POSTDOCTORAL POSITIONS** in the National Institute of Neurological and Communicative Disorders and Stroke, National Institutes of Health, are available immediately for biochemical studies on glycoproteins and glycolipids in myelination, demyelinating diseases, and transmembrane signaling of receptor mediated information. Experience in molecular biology, neural tissue culture or glycolipid biochemistry is desirable. Appointments would be as Intramural Research Training Associates (United States citizens) for persons within 3 years of receiving their doctoral degree and are renewable annually for a maximum of 3 years. Starting salary will be \$20,000 per year or higher depending on experience. Interested candidates should send a curriculum vitae and the names of 3 references to: Drs. Richard Quarles and Peter Fishman, Laboratory of Molecular and Cellular Neurobiology, Park Bldg., Rm. 451, 12420 Parklawn Drive, Rockville, MD 20892. For information on qualifications and benefits, please contact Ms. Janet Claggett on (301) 496-6334.

**NIH IS AN EQUAL OPPORTUNITY EMPLOYER**

## Inflammation/ Arthritis Research Opportunities



An equal opportunity  
employer

Pfizer Central Research, an industry leader in the area of inflammation/arthritis research, has several opportunities for scientists to contribute to the discovery of new antiinflammatory and antiarthritic drugs. You will join well established and growing teams of scientists in these areas and work in newly constructed and well equipped laboratory facilities. Current therapeutic interests encompass immunological approaches to inflammatory diseases, mechanisms involved in pain production/transmission and innovative manipulations of the arachadonic acid cascade and cytokines.

A PhD, appropriate postdoctoral training and a record of accomplishment in your research endeavors are required. Appropriate fields of training/experience include biochemistry/molecular biology, cell biology and experimental pathology, especially in the context of research problems in immunology, inflammation and pain/analgesia. Expertise is particularly sought in the following areas: (1) regulation of receptor function or signal transduction/second messenger processes; (2) cellular immunology; (3) *in vivo* models of acute and chronic inflammation. Demonstrated project management skills and/or previous industrial experience are welcome but not essential.

This position offers an excellent opportunity for professional recognition. We also offer a competitive compensation and benefit package, and the opportunity to live in an attractive Connecticut shore community. Please send resume and description of accomplishments to: Mr. Don Nelson, Manager of Employee Resources, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.

# GIBCO/BRL...

A DIVISION OF LIFE TECHNOLOGIES, INC., the leading supplier of research products to the Molecular Biology and Cell Biology industries, currently has openings for the following positions:

## **Workshop Instructor/Supervisor**

**Ph.D. in Molecular Biology with excellent written and verbal communication skills.**

- Direct, develop and present workshops and seminars.

## **Senior Scientist Positions**

**Ph.D. in Microbial Genetics or Physiology with post-doctoral experience in bacterial strain construction.**

- Provide scientific leadership for a Molecular Biology Research and Development group.

**Ph.D. with 2 years post-doctoral experience and publications in Molecular Biology and Immunochemistry. Experience with immunoassays and/or nucleic acid detection technologies.**

- Develop rapid and simple non-radioactive nucleic acid detection methods.

**Ph.D. with at least 2 years post-doctoral training and publications using recombinant DNA methods.**

- Apply novel hybridization methods to detection of HPV and other human pathogens. Construct DNA and RNA probes and apply these to non-radioactive detection methods.

**Ph.D. in Molecular Biology or related field. Hands on experience with *in situ* hybridization essential. Clinical and/or industrial experience and familiarity with product development process helpful.**

- Product development using *in situ* hybridization techniques.

## **Scientist Positions**

**Ph.D. in Molecular Biology with demonstrated above-average scientific competence.**

- Perform product development, improvement on exploratory studies in the area of Molecular Biology. Prepare research plans, design and perform experiments, evaluate and report results.

**Ph.D. in Molecular Biology or related field with experience in HPV.**

- Provide technical oversight for HPV clinical studies. Prepare manuscripts. Analyze in-house clinical data.

## **Lab Technician Positions**

**B.S. or B.A. in Biochemistry, Biology, Chemistry or the Health Sciences; M.S. in some positions helpful.**

- Independently evaluate, select and apply standard scientific techniques, procedure and criteria, using judgment in adaptations.

We have numerous technician positions available, for more details, feel free to visit our booth.

Please send resume or C.V. to:

Richard L. Hotaling, Jr., *Personnel Manager*

**GIBCO/BRL**, a Division of Life Technologies, Inc.

8717 Grovemont Circle, Gaithersburg, MD 20877

An equal opportunity employer, M/F/H/V





## NATIONAL SCIENCE FOUNDATION

NSF's Division of Biotic Systems and Resources is seeking qualified applicants for the following positions: **Program Director, Population Biology and Physiological Ecology; Program Director, Ecosystem Studies Program; and Program Director or Associate Program Director, Systematic Biology Program.** The incumbents to these positions will administer a program for basic research grant support, including advising applicants, reviewing proposals, and other administrative duties. The positions will be filled on rotational/temporary basis and are excepted from the competitive civil service. The salary range for the Program Director position is from \$45,763 to \$72,500\* (\*current statutory limit) and for the Associate Program Director, \$38,727 to \$65,000. The rotator candidate receives a leave of absence from his/her employer and salary is set in accordance with NSF's Rotator Program. Applicants should have a Ph.D. and/or equivalent research experience. In addition, 4 or more years of successful research experience is required for the associate program director position, and for the program director position, 6 or more years of successful scientific research beyond the Ph.D. is required. Applicants should submit a Standard Form 171, Application for Federal Employment, or resume to the **National Science Foundation, Room 208, 1800 G St. NW., Washington, DC 20550. Attn: Catherine Handle.** For further information call 202/357-7840. Hearing impaired individuals should call 202/357-7492. *NSF is an Equal Opportunity Employer.*

## UNIVERSITY OF BASLE FACULTY OF MEDICINE

Due to the Nomination of the present Occupant to another University the position of

### PROFESSOR FOR PATHOLOGICAL ANATOMY of the University of Basle and HEAD OF THE INSTITUTE OF PATHOLOGY at the University Hospital in Basle

is open for qualified candidates.

Persons with long-standing teaching experience (in German) in Pathological Anatomy are requested to send in their written application with the usual supporting documents to the **Dekanat der Medizinischen Fakultät, Hebelstrasse 25, 4031 Basle, Switzerland,** until December 4, 1987.

## Tissue Culture

Sigma Chemical Company, an international producer and distributor of laboratory biochemicals, has established a new and rapidly expanding line of tissue culture products. Several career opportunities to join this development team at Sigma now exist.



At Sigma, we offer:

- Flexible career pathways
- Job stability
- Historical financial strength
- New GMP facilities dedicated exclusively for tissue culture



General requirements to join this development team include:

- An energetic and committed work ethic
- Minimum BS in science field with relevant and preferably broad academic and/or industrial experience
- Strong communication skills



In our Tissue Culture Production and Quality Assurance groups we are looking for people with the following specific experience:

- General tissue culture lab experience
- Scientific writing
- Sterile-filtration
- GMP validation
- GMP compliance

Sigma offers competitive salary and full company paid benefits.

*Sound exciting?...Send your resume in confidence to:*

**SIGMA**  
Cell Culture

P.O. Box 14508  
St. Louis MO 63178  
Attn: Grant Hewitt

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## COMPUTATIONAL PROTEIN ENGINEERS

If you want to participate in the design and use of tomorrow's protein design computational tools, and if your professional qualifications and communications skills are excellent, and if you enjoy a variety of assignments and responsibilities, you should consider the unique opportunities at TRIPOS. As a member of our scientific staff, you could be involved in:

Specifying, designing and evaluating new functionality in the most flexible software extant for display and manipulation of polymers such as proteins, and of even more advanced hardware now under internal development.

Collaborating with a variety of user-customers, both industrial and academic, to formulate and solve protein design problems of major theoretical and commercial importance.

At TRIPOS, the worldwide leader in molecular modeling software, you would live in one of the nation's most convenient and inexpensive metropolitan areas. Compensation package negotiable, based on experience and credentials. Please send resumé in confidence to Dr. Richard Cramer. *TRIPOS is an equal opportunity employer.*

TRIPOS ASSOCIATES, INC.  
6548 Clayton Road  
St. Louis, MO 63117  
*A subsidiary of EVANS & SUTHERLAND*





# RESEARCH SCIENTISTS

With GENELABS, finding tomorrow's cures holds special urgency and significant reward. Today's health care concerns are daily challenges at Genelabs. Performance and pioneering technology are what set us apart. We're looking for the right people—with sound research skills and a genuine sense of mission—ready to join our highly interactive professional team.

## PEPTIDE CHEMIST

Ph.D. in organic or protein chemistry and 2 or more years post doctorate experience in the structural modification and affinity labeling of peptides. You will also be able to identify receptor site interactions with oligopeptides. Experience with automated peptide synthesis important.

## PROTEIN CHEMIST

Ph.D. in biochemistry plus 3-5 years experience in structural determination of macromolecules; fragmentation and sequencing of proteins and peptides. Experience with HPLC, 2D gel electrophoresis and automated sequencing/synthesis important.

## BIO-ORGANIC CHEMIST

Ph.D. in protein chemistry, biochemistry, immunochemistry or synthetic organic chemistry, plus experience with immunoconjugates. The position will involve extensive interactions with a multidisciplinary team of scientists in the design and development of novel therapeutic agents for the treatment of infectious diseases.

\*Opportunities also exist for qualified Research Assistants & Associates.

Our work environment is exceptional in our new facilities located in the Seaport Centre on the San Francisco Peninsula. Please forward CV and names of 3 references, in confidence, to: GENELABS INCORPORATED, 505 Penobscot Drive, Redwood City, CA 94063. Attn: Personnel. An equal opportunity employer.



# Biomedical Research

Bristol-Myers has made  
a multi-million dollar commitment  
to your future

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OUR WALLINGFORD, CONNECTICUT WORLD HEADQUARTERS for pharmaceutical research opened in 1986, signaling the start of our second century. This environment fosters interaction across many disciplines and rewards individual achievement. Activities in Wallingford are aimed at the discovery and development of new therapeutic agents in 4 key areas: anti-cancer, central nervous system, cardiovascular, and anti-infective research. Immediate opportunities are available for:

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## PhD MOLECULAR IMMUNOLOGIST

You must be capable of applying modern techniques of molecular immunobiology to discover and develop novel approaches to regulation of the immune response in cancer.

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## ASSISTANT/ASSOCIATE SCIENTIST

Requires a BS or MS degree, plus experience in utilizing *in vivo* and *in vitro* techniques in murine models of tumor immunology.

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## ASSISTANT/ASSOCIATE SCIENTIST

Requires a BS or MS degree plus experience with the techniques of membrane receptor biochemistry. Familiarity with protein purification and characterization, and experience in generating polyclonal and monoclonal antibodies are desirable.

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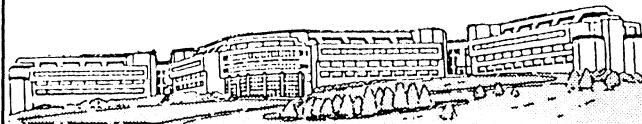
BRISTOL-MYERS is a multi-billion dollar global competitor that pursues excellence in pharmaceutical research and development. Our strong, sustained growth, highly competitive salaries, extensive benefits and career support have helped us attract and keep the best people.

TO EXPLORE YOUR FUTURE on the leading edge of pharmaceutical research, send resume with salary history to: **BRISTOL-MYERS COMPANY, Pharmaceutical Research & Development Division, Attn: TZ4, P.O. Box 5100, 5 Research Parkway, Wallingford, CT 06492.**

An equal opportunity employer.

## Bristol-Myers

Explore with us.



## POSITIONS OPEN

The Center for Advanced Research in Biotechnology (CARB) has an opening for a **MACROMOLECULAR CRYSTALLOGRAPHER**. This position requires a Ph.D. level scientist who has extensive experience working on the structure and function of biological molecules with emphasis on macromolecules. The successful candidate will have shown an interest and proven capacity in developing techniques to improve or determine phases ab initio for difficult crystallographic problems which have resisted solution using available phase determining techniques. The position also requires scientific programming abilities with experience in developing programs and program packages used to solve and study crystal structures of biological interest.

Curriculum vitae and three letters of reference should be sent to: **Professor Thomas L. Poulos, CARB, Building 221, Room A353, National Bureau of Standards, Gaithersburg, MD 20899** by 18 December 1987.

### MICROBIAL PHYSIOLOGIST

Ricerca, Inc. is currently seeking a qualified microbial physiologist for a fermentation process research and development position. Responsibilities will include the supervision and operation of a pilot plant for toll fermentation and fermentation development projects. The successful candidate will have a M.S. or Ph.D. in microbiology with hands-on experience in a variety of organisms and fermentation systems.

Ricerca, Inc. is a research and development company which provides broad-based technical services to its clients on a contract basis. Our facilities are located in Concord Township, an attractive Cleveland, Ohio suburb. *We offer competitive salaries, an excellent Employees Benefits Program, and are an Equal Opportunity Employer.*

Interested parties should forward their résumés to: **Andrew J. Pillar**

**Ricerca, Inc.**

P.O. Box 1000  
Painesville, OH 44077

**MOLECULAR BIOLOGIST:** Applications are invited from qualified candidates to start Oncogene laboratory. Applicants should have a Ph.D. degree in biological sciences with special interest in molecular biology. Experience in gene amplification techniques, labelling DNA probes and various electrophoresis techniques are required. We offer a competitive salary and a pleasant working environment. Please send résumé and three reference names to: **M. R. Pandian, Ph.D., Nichols Institute, 26441 Via De Anza, San Juan Capistrano, CA 92675.** *Equal Opportunity Employer.*

### MOLECULAR BIOLOGY OF SIGNAL TRANSDUCTION IN LOWER EUKARYOTES

Position level negotiable, **POSTDOCTORAL, INSTRUCTOR OR ASSISTANT PROFESSOR** (non-tenure-track), depending on qualifications. To study insulin-insulin receptor axis in *Neurospora crassa*. Receptor is partially purified, characterized, cloning underway, metabolic effects documented. Address inquiries to:

**John Lenard, Professor of Physiology**  
UMDNJ—Robert Wood Johnson Medical School  
675 Hoes Lane  
Piscataway, NJ 08854-5635

### MOLECULAR IMMUNOLOGY FELLOWSHIP VIRGINIA MASON RESEARCH CENTER (VMRC)

A postdoctoral position is available for studies of human immunogenetics and autoimmunity, focused on molecular biology of TcR and/or HLA class II genes. Experience with genetics and molecular biology highly desirable. Please reply to: **Dr. Gerald Nepom or Dr. Pat Concannon, VMRC, 1000 Seneca Street, Seattle, WA 98101.**

## POSITIONS OPEN

### MOLECULAR BIOLOGIST

**ASSISTANT PROFESSOR, TENURE-TRACK**, to begin September 1988. Ph.D., postdoctoral experience and record of publications indicating ability to establish an active, independent research program are required. Research should focus on developmental molecular genetics in plants, *Drosophila* or yeast, and complementary interests of molecular biologists currently on faculty. Plant virologists experienced in use of plant viruses or T1 plasmids as vectors for study of gene expression in plants are particularly encouraged to apply. Teaching assignments in graduate biotech/biomed program and undergraduate curriculum. Applications received by 11 December 1987 will receive priority consideration.

Send curriculum vitae, description of research, and three references to: **Richard H. White, Chair Search Committee, Biology Department, College of Arts and Sciences, University of Massachusetts (UMASS)/Boston, Harbor Campus, Boston, MA 02125-3393.** *An Affirmative Action/Equal Opportunity/Title IX Employer.*

### MOLECULAR BIOLOGIST YALE SCHOOL OF MEDICINE

A tenure-track position in the Radiobiology Section of the Department of Therapeutic Radiology at Yale University School of Medicine is to be filled at the assistant professor level. Radiobiology is comprised of a small and highly interactive group of molecular biologists working on (i) DNA repair, recombination and mutagenesis in both prokaryotic and mammalian cell systems, (ii) animal viruses, (iii) mechanisms of oncogenesis and (iv) tumor therapy. Candidates should show outstanding potential for developing an independent research program. Individuals should send curriculum vitae, statement of research interests plus the names of three references to: **Search Committee, Radiobiology, Department of Therapeutic Radiology, Yale School of Medicine, New Haven, CT 06510.** *Yale is an Equal Opportunity/Affirmative Action Employer.* Deadline for applications is 1 February 1988.

### NEUROBIOLOGIST—ASSISTANT PROFESSOR

Position available 1 January 1988. Tenure-track. Research, service, and teaching (neurobiology). Participate in graduate training program. Fundable research program expected. Some local support. Ph.D. plus 2 years of postdoctoral training in neurosciences/cell biology. U.S. citizen. Send curriculum vitae plus three confidential references to:

**Dr. Carl R. Morgan, Department of Anatomy and Cell Biology, East Carolina University, School of Medicine, Greenville, NC 27834-4354.**

*East Carolina University is a constituent institution of the University of North Carolina, an Equal Opportunity/Affirmative Action Employer.* Proper documentation of identity and employability required. Applications should be received by 15 December 1987.

**NMR SPECTROSCOPIST/RESEARCH ENGINEER** position open at Stanford Magnetic Resonance Laboratory. Responsibilities include maintenance and upgrading of SMRL spectrometer systems [Bruker AM-500, HXT-360, MSL-100 (Biospec-II) and modified Varian XL-100], implementation and development of instrumentation and NMR techniques including probe design and construction and experimental design, supervision of instrument use and collaboration on research projects. Proficiency in NMR electronics, hardware and software essential. Candidates should have an advanced degree in engineering, physics or physical chemistry. Rank and salary depending on specific qualifications and experience. Contact: **Dr. Oleg Jardetzky, Stanford Magnetic Resonance Laboratory, Stanford University, Stanford, CA 94305-5055; Telephone: 415-723-6270.** *Stanford is an Equal Opportunity/Affirmative Action Employer.*

**NURSE PHYSIOLOGIST—TENURE TRACK TEACHING POSITION**, BSN Program, NLN accredited. Teach Pathophysiology; clinical instruction possible. Earned doctorate in physiology required; BSN—minimum degree.

Appointment date 1 July or 15 August 1988. Send letter of application, transcripts, and three current letters of reference by 15 February 1988 to: **Mary R. Hassett, Acting Dean, Fort Hays State University, School of Nursing, Stroup Hall, 600 Park Street, Hays, KS 67601-4099.** *Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### NMR SCIENTIST

The Pittsburgh NMR Center for Biomedical Research [under the auspices of Carnegie Mellon University (CMU) and the University of Pittsburgh (Pitt)] has an opening for an NMR scientist. The center has a Bruker BIOSPEC II 4.7-tesla NMR system with a 40-cm bore superconducting magnet for multinuclear NMR imaging and in vivo spectroscopic studies using animal models. The position requires a Ph.D. or equivalent, and extensive experience in NMR techniques. The appointee will participate in a multidisciplinary research program involving departments of biology, chemistry, computer science, medicine, surgery, and physics, and will have opportunities to carry out collaborative research. This is a staff appointment and salary depends on experience and qualifications. Interested persons should send curriculum vitae, and names of three references to: **Dr. Chien Ho, Pittsburgh NMR Center for Biomedical Research, Carnegie Mellon University, 4400 Fifth Avenue, Pittsburgh, PA 15213.** *CMU and Pitt are Affirmative Action/Equal Opportunity Employers.*

### PATHOLOGY LABORATORY TEACHING VACANCY

The National College of Chiropractic, Lombard, Illinois, is seeking a person to supervise the histological teaching of the laboratory portion of Systems Pathology. Teaching experience is strongly recommended. Familiarity with normal and abnormal tissues is required. Limited training in abnormal tissues is available if needed. A 12-month, tenure-track position available for terminal degrees, non-tenure track for masters degrees. Salary range \$25,000 to \$30,000, plus 1 month paid vacation, health, and retirement benefits. Initial rank dependent upon qualifications and experience. Position available 1 September 1988.

Application should include college transcripts, and three letters of recommendation sent to:

**Dr. Calvin C. Kuehner**  
Chairman, Search Committee  
The National College of Chiropractic  
200 East Roosevelt Road  
Lombard, IL 60148

### PHARMACOLOGY FACULTY POSITION

The Department of Pharmacology and the Cancer Center of the University of Rochester invite applications for a tenure-track faculty position at the rank of assistant or associate professor. The successful applicant may hold a primary appointment in the Department of Pharmacology or joint primary appointments in the Department of Pharmacology and in the Cancer Center. Applicants should have a Ph.D. degree in pharmacology, biochemistry, physiology, chemistry, or a related field, or an M.D., and postdoctoral research training, the potential to attract research support for an independent research program, and an interest in professional and graduate education. Applications are specifically sought from individuals who can apply modern techniques of analytical chemistry, molecular and cell biology, or physiology to investigations in drug-chemical biotransformation, bioactivation, and mechanisms including chemical carcinogenesis. The deadline for applications is 1 February 1988. Applicants should forward curriculum vitae, a list of publications, three letters of recommendation or the names of three referees, and a summary of current and future research interests to: **Pharmacology Search Committee, Department of Pharmacology, Box Pharmacology, School of Medicine and Dentistry, 601 Elmwood Avenue, Rochester, NY 14642.** *The University of Rochester is an Equal Opportunity Employer, and applications from women and from minority groups are encouraged.*

**PHYSIOLOGIST:** The Cerebrovascular Research Center Department of Neurology, is seeking applications for a full-time research position at the level of assistant or associate research professor. The applicant must have had extensive laboratory experience in research on the cerebral circulation with a proven record of research accomplishments. Candidates should have a strong interest in cerebrovascular disease. Applicants should send curriculum vitae, a description of research interests, and three letters of reference to: **Dr. Martin Reivich, Cerebrovascular Research Center, 429 Johnson Pavilion, University of Pennsylvania, Philadelphia, PA 19104-6063.**

## POSITIONS OPEN

### PHYSIOLOGY POSITION UNIVERSITY OF CALIFORNIA, SAN FRANCISCO (UCSF)

The Department of Physiology, UCSF seeks candidates for a tenure-track position at the level of **ASSISTANT OR ASSOCIATE PROFESSOR**. Candidates should have an active research program using cellular, molecular or biophysical methods to study physiological problems. Those candidates whose background qualifies them to teach mammalian physiology are particularly encouraged to apply. Interested individuals should send curriculum vitae, a summary of research and arrange to have at least three letters of recommendation sent to:

Physiology Search Committee, Box 0444

V. Lingappa  
University of California, San Francisco  
San Francisco, CA 94143-0444

UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

## POSITIONS OPEN

### PLANT PHYSIOLOGICAL ECOLOGIST

The Department of Ecology and Evolutionary Biology at the University of Connecticut seeks a plant physiological ecologist for a tenure-track position at the assistant/associate professor level beginning September 1988. The successful candidate will be expected to teach an advanced course in his/her area of interest and participate in an undergraduate biology, plant physiology, or ecology course. Applicants should demonstrate a strong research and teaching commitment and preference will be given to individuals whose interests complement those of the faculty. There are ample opportunities for interaction with faculty in all areas of biology. Applicants should submit curriculum vitae, a statement of research interests, reprints, and three letters of reference by 15 December 1987 to: **John Silander, Chairman of the Plant Physiological Ecology Search Committee, Department of Ecology and Evolutionary Biology, Box U-42, 75 North Eagleville Road, The University of Connecticut, Storrs, CT 06268. We are an Affirmative Action/Equal Opportunity Employer, M/F. (Search #8A148).**

## POSITIONS OPEN

**PLANT BIOLOGIST.** Davidson College invites applications from broadly trained plant biologists with a concentration in plant ecology for a tenure-track appointment at the assistant professor level. Appointment requires a Ph.D. degree and postdoctoral experience is desirable. Teaching requirements will include introductory biology and quantitative field botany. An active research program involving students is expected. Interested persons should send curriculum vitae, a statement of teaching philosophy and research interests and names and addresses of referees to: **Dr. John Williamson, Chairman, Department of Biology, Davidson College, Davidson, NC 28036, by 1 February 1988. Davidson College welcomes applications from women and minorities.**

### PLANT SYSTEMATIST

An outstanding vascular plant systematist is sought for a tenure-track assistant professorship to begin September 1988. The successful candidate will establish and maintain an active research program in modern plant systematics and evolution, participate in graduate and undergraduate teaching, and supervise an herbarium. Ph.D. required. Preference will be given to candidates with demonstrated proficiency in molecular and/or biochemical techniques. Application review begins 15 January 1988. Send letter including background and research goals, curriculum vitae, and the names, addresses, and telephone numbers of three references to: **Dr. Sharon Eversman, Chair, Search Committee, Department of Biology, Montana State University (MSU), Bozeman, MT 59717. Detailed description of position is available. MSU is an Affirmative Action/Equal Opportunity Employer.**

**PLANT TISSUE CULTURIST.** Sogetal Corporation, a plant biotechnology company in the San Francisco Bay Area, is seeking an assistant/associate scientist to join its expanding tissue culture programs. The ideal candidate will have a B.S. or M.S. degree with a minimum of 2 years of experience in cereal tissue culture. Sogetal offers a competitive salary and benefits program. Please send résumé with references to: **Human Resources Department/PTC, Sogetal, Inc., 3872 Bay Center Place, Hayward, CA 94545. An Equal Opportunity Employer.**

### POPULATION BIOLOGIST

The Bodega Marine Laboratory, a research unit of the University of California, invites applications for a tenure-track position as assistant or associate professor in population biology. Applicants must have a Ph.D. (or equivalent), significant postdoctoral research experience, and demonstrated excellence in their fields. We particularly encourage scientists to apply whose research will take advantage of the diverse ecosystems of the Northern California coast, where the laboratory and its surrounding natural reserve are located. In addition to research and teaching, the appointee will serve as the Laboratory's coordinator for research and instruction in population biology, alongside counterparts from organismic biology, and aquaculture and fisheries. The position is at the Laboratory full-time, though the appointee will also be a member of an appropriate department on the Davis Campus. Applicants should provide a letter of research and teaching interests, curriculum vitae, two selected reprints, and the names and addresses of three references to: **Dr. James S. Clegg, Director, Bodega Marine Laboratory, P.O. Box 247, Bodega Bay, CA 94923. The Selection Committee will begin review of applications on 25 January 1988; the position will remain open until filled. The University of California is an Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL ASSOCIATE:** Position available in biochemistry/cell biology to study the proteins that mediate or control cell-to-cell communication via gap junctions in the mammalian lens. Experience in membrane protein chemistry, and immunochemical techniques desirable. Send curriculum vitae to: **Charles F. Louis, Department of Veterinary Biology, University of Minnesota, 1988 Fitch Avenue, St. Paul, MN 55108. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.**



## ROSWELL PARK MEMORIAL INSTITUTE OFFERS PROFESSIONAL OPPORTUNITIES

A significant redirection and expansion of the clinical and basic research programs is underway at **ROSWELL PARK MEMORIAL INSTITUTE**, Buffalo, New York. Under new leadership and administration, a Strategic Plan has been completed, which includes the renovation of laboratories and patient units, the construction of new clinical and research facilities, and a reaffirmation of the Institute's commitment to biomedical research and graduate education.

Roswell Park Memorial Institute is an NCI-designated Comprehensive Cancer Center, with 19 buildings, located on a twenty-five acre downtown campus which includes a 218-bed hospital and an Ambulatory Services Center housing thirteen specialty clinics. The Institute's diverse research programs range from genetics, experimental therapeutics, and biological response modifiers to x-ray crystallography and magnetic resonance technology. The Institute is a facility of the New York State Department of Health with a fiscal year 87-88 budget of over \$110 million, including \$25 million in research grants and contracts.

Educational opportunities available at the Institute include a Graduate Division of the State University of New York at Buffalo which confers doctoral and master degrees through ten academic departments. Resident training through the State University of New York at Buffalo Medical School is conducted in thirteen specialties. The student body includes 300 predoctoral students and 70 postdoctoral fellows and 50 residents and clinical fellows.

For physicians/scientists with a commitment and a proven track record in basic, clinical and/or oncological research, excellent opportunities are available in the following areas:

### DEPARTMENT/DIVISION CHAIRS

- Medicine
- Pediatrics
- Radiation Medicine
- Diagnostic Radiology
- Molecular Virology
- Molecular Immunology
- Clinical Immunology

### SENIOR STAFF POSITIONS

- Director, Tissue Procurement
- Director, Flow Cytometry

- Director, Cytogenetics
- Director, Bone Marrow Transplant

### OTHER POSITIONS

- Gynecology
- Intensive Care Unit
- Clinical Pharmacology and Therapeutics
- Urology
- Experimental Therapeutics
- Medicine (LAK cell program)

Qualified candidates are encouraged to submit their Curriculum Vitae to the Office of the Institute Director, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, New York 14263.

RPMI IS AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY EMPLOYER.

**Roswell Park**  
**Memorial Institute**

Thomas B. Tomasi, MD, PhD — Director

Department of Health • State of New York



## SCIENCE, ENGINEERING AND DIPLOMACY FELLOWSHIPS

### Applications Invited

The American Association for the Advancement of Science (AAAS), in cooperation with the Agency for International Development (AID) and the Department of State (STATE) is seeking applicants for two or more Science, Engineering and Diplomacy Fellowships. Fellows will spend one year, beginning 1 September 1988, working either in the Bureau of Oceans and International Environmental and Scientific Affairs of the Department of State or in one of several bureaus and offices of the Agency for International Development. Other assignments may also be possible.

Prospective Fellows must demonstrate exceptional competence in some area of science or engineering, be flexible, have some experience and/or a strong interest in applying knowledge toward the solution of problems in the area of foreign affairs, and have a Ph.D. or equivalent in years of experience. Awardees will work on scientific and technical subjects in international affairs: foreign policy for STATE and international development for AID. In general, individuals are urged to apply from any area of physical, biological, behavioral, and social science and engineering and whose experience and training is applicable to any one of the following areas: food and agriculture; health and population; nuclear nonproliferation; scientific exchange; forestry, natural resources, and ecology; oceans and fisheries; communications; national security; and human resources and education, among others.

The Fellows will serve a one-year appointment at a salary consistent with education level and experience, if possible, but not exceeding the GS-12 level (beginning at about \$33,000). A security clearance process will be initiated after selection. The clearance must be obtained before a selectee can begin work in the State Department or AID and the fellowship award is contingent upon the selectee obtaining this clearance. Prospective Fellows must be U.S. citizens.

Deadline for receipt of application materials is 15 January 1988. The awards will be announced by mid-April, 1988. For more information and application details write:

Science, Engineering and Diplomacy Fellows Program  
American Association for the Advancement of Science  
1333 H Street, NW  
Washington, DC 20005

## Molecular Immunologists

Monsanto Biological Sciences Department, located at the Life Sciences Research Center in suburban St. Louis, has immediate openings in its Molecular Genetics and Mammalian Biology group for Molecular Immunologists.

We are looking for scientists with excellent skills in DNA cloning/expressions and molecular genetics analysis of the immune system to support our basic and applied research program in human health care. These challenging positions will initially focus on the study of gene organization and regulation as it relates to control of the immune system and development of autoimmune diseases.

For the first position, the ideal candidate will have a Ph.D. or MD/Ph.D. degree, post-doctoral experience and a publication record in molecular genetics and immunology. Experience in recombinant DNA technology and mammalian cell culture is required. For the second position, an MS or BS in the biochemical sciences and extensive experience in molecular genetics are required.

Interested candidates should send their resume and names of three references to: **John Bussen; MONSANTO COMPANY; 700 Chesterfield Village Parkway; Department BB5B-DT; Chesterfield, MO 63198.** An Equal Opportunity Employer M/F/H/V.

# Monsanto

## STRATAGENE

### ■ Research Program Director

Stratagene is looking for individuals who can assume the role of research program director. Qualified applicants must have an ongoing research program and have demonstrated the ability to obtain research support in the form of grants or contracts in the areas of genetic disease, genome mapping, mammalian cell biology, or mammalian gene expression, the latter preferably with relevance to expression in transgenic animals. Corporate matching funds are available to supplement research programs supported by grants. In addition, technical support and reagents will be available from Stratagene's molecular biology research products division. Stratagene offers an extremely attractive compensation package to qualified individuals, including a substantial stock option plan.

Stratagene's financial success has allowed it to relocate its research facility to the heart of La Jolla's research community. The Salk Institute, Scripps Clinic, and the University of California, San Diego are among the numerous academic and commercial research centers within one mile of the new Stratagene location. The new site is adjacent to the Torrey Pines State Reserve, offering miles of coastal hiking and jogging trails leading to the Pacific Ocean.



## STRATAGENE

Candra A. Carter  
Administrative Coordinator  
Stratagene  
11099 North Torrey Pines Road  
La Jolla, CA 92037

Inquiries will be accepted  
in strict confidence by:

## POSTDOCTORAL FELLOW IN RESPIRATORY PHARMACOLOGY

BURROUGHS WELLCOME CO., an innovative pharmaceutical company located in the Research Triangle Park, North Carolina, and having a top reputation for research, has an immediate opening for a Postdoctoral Fellow in Respiratory Pharmacology to develop and expand efforts directed towards the study of mechanisms of chronic inflammation, hyper-reactivity and bronchoconstriction in the lung *in vivo*.

Requirements are a Ph.D. in Pharmacology/Physiology, with extensive experience in pulmonary function procedures *in vivo*. Knowledge of, and experience with, analytical techniques suitable for analyses of mediators of allergy and inflammation would be advantageous. This position offers an opportunity for a scientist to broaden his/her experience while allowing research in an area of mutual interest. Postdoctoral Fellows are initially appointed for one year with renewal for a second year upon mutual agreement of the employee and the Company.

BURROUGHS WELLCOME CO. offers a comprehensive company-paid benefit package, a competitive salary and an excellent environment in which to apply your professional capabilities. Qualified minority, female, veteran and handicapped individuals are encouraged to apply. Individuals should forward a curriculum vitae with transcripts to:

Employment Supervisor, Position #1226,  
BURROUGHS WELLCOME CO., 3030  
Cornwallis Road, Research Triangle  
Park, NC 27709.



**BURROUGHS  
WELLCOME CO.**



**Wellcome**

An Equal Opportunity/Affirmative Action Employer

## Research Scientists

*Synergen, a leading biotechnology company in Boulder, Colorado, offers the opportunity to build scientific careers in a stimulating intellectual environment. We seek recent Ph.D.'s with postdoctoral experience, technicians, and more senior people interested in becoming part of a rapidly expanding company. There are currently openings for the following persons:*

**Molecular Biologists** to study the expression of eukaryotic genes encoding growth factors, neurotrophic factors, and proteins that modulate inflammatory processes. We also seek molecular biologists interested in developing high level expression systems in eukaryotes.

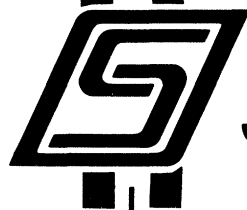
**Protein Chemists** to participate in the isolation and characterization of proteins involved in tissue breakdown and repair, or in isolating and characterizing specific cell receptors.

**Cell Biologists** to develop cell-based models of pathophysiological processes, to aid in the development of *in vitro* assays for bioactive proteins, and to study endothelial cell biology.

**Biochemists** to define the mechanism of action of proteins interacting with membrane receptors and involved in signal transduction.

**Neurobiologists** to assay, isolate, and characterize neurotrophic factors and neuronal receptors, and to study nerve and glial cell biology.

Synergen offers competitive salaries, generous benefits, and the financial stability required for future development. Please send a **CV, bibliography, and references** to:



# SYNERGEN

Recruitment Director  
1885 33rd Street  
Boulder, CO 80301

## Postdoctoral Fellows Molecular Genetics

Smith Kline & French Laboratories, a leader in pharmaceutical research, is seeking additional postdoctoral fellows to expand its current research programs employing recombinant DNA technology.

Excellent opportunities exist for innovative interdisciplinary research in our new and superbly equipped Research and Development Center in suburban Philadelphia near Valley Forge, Pennsylvania.

The Department of Molecular Genetics is seeking outstanding Ph.D. scientists to pursue research on:

- Streptomyces proteases/role in foreign protein production
- Gene expression in Streptomyces
- Expression and functional analysis of retroviral/AIDS proteins
- T-lymphocyte receptors-structure/function studies
- Regulation of interleukin-1 gene expression
- Tumor Necrosis Factor action at the molecular and cellular level
- Transcriptional activation
- Cloning/expression of Candida genes in S. cerevisiae

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. Publication of research results is encouraged and supported. For confidential review, please forward your C.V. and names of three references to: Robert F. Obst, R0097 Manager, Personnel Relations, Smith Kline & French Laboratories, Research and Development Division, P. O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

**SK&F**  
A SmithKline Beckman Company

## POSITIONS OPEN

**POSTDOCTORAL FELLOW** needed immediately to work on several human visual electrophysiology projects, including use of pattern VEPs under sedation, VEP measures of binocularity pre- and post-strabismus surgery, and VEP topography and source localization. Stipend: \$20,000 per year. Contact: **Dr. K. Jeffrey Eriksen, Division of Ophthalmology, Childrens Hospital Los Angeles/USC, Box 54700, Los Angeles, CA 90054; telephone: 213-669-2156. Equal Opportunity Employer.**

### POSTDOCTORAL FELLOW

Available immediately for 2 to 3 years for Ph.D./M.D. with training/research background in molecular biology. The research will focus on specific sex steroid-induced uterine proteins. Send curriculum vitae and names of three references to: **Randal C. Jaffe, Department of Physiology and Biophysics, University of Illinois College of Medicine at Chicago, P.O. Box 6998, Chicago, IL 60680.**

### POSTDOCTORAL FELLOW

Grant-funded research position available immediately to study the molecular biology of lung antioxidant enzyme regulation. Opportunity for extensive interaction with large research group examining various aspects of lung vascular injury. Send curriculum vitae and names of three references to: **Dr. Jacquelin B. Shaffer, Wadsworth Center for Laboratories and Research, Health Research, Inc., Albany, NY 12201. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL OR JUNIOR STAFF POSITION** to study nuclear change involved in initiation of hepatocarcinogenesis. Research encompasses cloning/sequencing, RNA work, flow cytometry, photoaffinity labeling, HPLC, various gels. Salary negotiable. Contact: **Dr. G. Clawson, Pathology, Ross Hall, George Washington University, 2300 Eye Street NW, Washington, DC 20037.**

A **POSTDOCTORAL POSITION** is available 1 January 1988 to purify and investigate the mechanism of action of a newly identified human T lymphocyte growth-activation factor receptor. Experience in protein and receptor biochemistry would be helpful.

Interested applicants should send their curriculum vitae, a short statement of their relevant research experience, and names of three references to: **Dr. Philip M. Rosoff, Department of Physiology, Tufts University School of Medicine, 136 Harrison Avenue, Boston, MA 02111.**

**POSTDOCTORAL POSITION** to examine the mechanism of action of specific oncogenes and phorbol ester tumor promoters. The project will focus on regulation of specific enhancer sequences during transformation, and purification of the proteins which bind to these sequences. Experience in molecular biology including work with RNA and DNA is required. Send curriculum vitae, references, and publications to: **Dr. Andrew S. Kraft, University of Alabama, THT #513, Birmingham, AL 35294.**

**POSTDOCTORAL POSITION:** available immediately for biochemical studies of growth factors in human tumors and biological fluids. Project under way at primary pediatric teaching hospital of the University of Washington. Candidate should have experience in isolation, purification, and characterization of biologically active molecules; cell culture techniques and bioassays. Send curriculum vitae and references to: **David Tapper, M.D., Surgeon-in-Chief, Children's Hospital and Medical Center, 4800 Sand Point Way N.E., Seattle, WA 98104. An Affirmative Action Employer.**

**POSTDOCTORAL POSITION** in molecular biology or bacterial genetics available now to study regulation of nitrogen metabolism in enteric bacteria, especially the roles of the *ntr* and *nac* genes in regulating expression of amino acid catabolic genes. Ideal candidates should have experience in prokaryotic genetics and modern DNA technology. Send curriculum vitae and three reference letters to: **Dr. Robert Bender, Biology Department, University of Michigan, Ann Arbor, MI 48109. A nondiscriminatory, Affirmative Action Employer.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately for recent Ph.D. trained in molecular biology/biochemistry. Candidate will initiate independent research involving cloning and sequencing cDNA for marsupial plasma proteinase inhibitors characterized in this laboratory. Project is part of recently renewed long-term study of effects of metalloproteinases on mammalian plasma proteinase inhibitors. Position is located in an established protein biochemistry laboratory in an excellent environment for molecular biology. Starting salary \$26,000 per year plus benefits. Send résumé and names of three references to: **Dr. Lawrence Kress, Experimental Biology Department, Roswell Park Memorial Institute, Buffalo, NY 14263. Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITION:** Available immediately to investigate signal transduction mechanisms involved in mouse egg activation and the establishment of the zona pellucida block to polyspermy. Background in biochemistry is preferred, and a willingness to learn cell biological, immunological, and micro-injection techniques is required. Send curriculum vitae and names of references to: **Dr. Gregory S. Kopf, Department of Obstetrics and Gynecology, Room 313 John Morgan Building, University of Pennsylvania, Philadelphia, PA 19104.**

A **POSTDOCTORAL POSITION** will be available starting February 1988 to study the structure and function of G-protein coupled peptide receptors. Projects available include biochemical characterization of membrane receptors, identification of mechanisms by which specific intracellular messengers are regulated in response to receptor activation, and mechanisms of receptor regulation. Experience with membrane protein biochemistry, peptide chemistry, and monoclonal antibody preparation is highly desirable. Send curriculum vitae and names, addresses, and telephone numbers of three references to: **Dr. A. Schonbrunn, Department of Pharmacology, University of Texas Medical School, P.O. Box 20708, Houston, TX 77225. An Equal Opportunity Employer. Women and minorities are encouraged to apply.**

**POSTDOCTORAL POSITION** available in the study of mechanisms of toxic injury to cardiovascular tissue. Individual will be encouraged to examine cardiovascular enzyme systems which have been previously understudied. Biochemical and molecular approach is to be utilized in this basic pathobiology study. Send curriculum vitae and references to: **Dr. P. J. Boor, Chemical Pathology Division, University of Texas Medical Branch, Galveston, TX 77550. Telephone: 409-761-3656. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available immediately to develop human monoclonal antibodies for use in the detection and treatment of cancer. Approaches will focus on development of protocols for in vitro immunization of human lymphocytes, human hybridoma production, and identification of novel tumor-associated antigens. Experience with in vitro immunization and hybridoma technology and/or membrane protein purification preferred. Send curriculum vitae and three letters of recommendation to: **Paula Boerner, Ph.D., UCSD Cancer Center, T-011, University of California, San Diego, La Jolla, CA 92093. UCSD is an Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL POSITION IN FETAL PHYSIOLOGY/ENDOCRINOLOGY

Available July 1988, position supported by USPHS—NIH Training Grant. Various aspects of the regulation of the cardiovascular and several fetal endocrine systems are under investigation. These include: development of the hypothalamic-pituitary-adrenal axis, the hormonal and neuroendocrine regulation of the onset of labor, cardiovascular-endocrine interactions, fetal and placental growth and differentiation by growth factors and hormones, and placental transport of ions. Studies may involve the use of in vitro and in vivo approaches as well as mathematical modeling.

Applicants should have a strong background in endocrinology, physiology, cell biology, or mathematics. Send curriculum vitae and the names of three references to: **Dr. Lawrence D. Longo, Division of Perinatal Biology, Department of Physiology, School of Medicine, Loma Linda University, Loma Linda, CA 92350. Equal Opportunity Employer.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately to study the biochemistry and molecular biology of acquired drug resistance in ovarian carcinoma. Studies will focus on, but will not be limited to, cisplatin resistance. Experience with tissue culture or biological transport is desirable. Salary commensurate with experience, health benefits provided. Please send curriculum vitae, reprints, and the names of three references to: **Dr. Paul A. Andrews, Cancer Center, University of California, San Diego T-012, La Jolla, CA 92093. An Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL POSITION

Position available to study the regulation, expression, and domains of human cytomegalovirus gene products. Preference will be given to applicants with a strong background in molecular biology. Interested candidates should submit curriculum vitae and three letters of reference to: **Dr. Lenore Pereira, Department of Stomatology, Microbiology and Immunology, University of California, San Francisco, HSW-604, San Francisco, CA 94143-0512. The University of California is an Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL POSITION DEPARTMENT OF MEDICINE HARVARD MEDICAL SCHOOL

A postdoctoral position is available for a recent Ph.D. to join a multidisciplinary laboratory studying the control of blood cell differentiation, including the cell biology, molecular biology, and biochemistry of erythropoiesis. Send curriculum vitae, statement of research interests, and names of three references to:

**Dr. Arthur J. Sytkowski  
Hematology and Oncology Research  
New England Deaconess Hospital  
Harvard Medical School  
185 Pilgrim Road  
Boston, MA 02215**

### POSTDOCTORAL POSITION

Cardiovascular research laboratory studying the molecular biology of apolipoproteins is seeking applicants with recombinant DNA experience. Research will focus on mechanisms of gene regulation and site-directed mutagenesis in mammalian cells, bacteria, and transgenic mice. Send curriculum vitae and names of three references to: **R. W. Mahley, M.D., Ph.D., Gladstone Foundation Laboratories for Cardiovascular Disease, University of California, P.O. Box 40608, San Francisco, CA 94140-0608.**

**POSTDOCTORAL POSITION.** One-year position open now, with probable renewal. Salary \$20,000 per year. Project entails parasite-induced resistance to a plant virus in fruit crops. Expertise in molecular cloning, sequencing and assay for gene products mandatory. Send curriculum vitae, transcripts, and reference letters to: **Dr. D. C. Ramsdell, Department of Botany and Plant Pathology, 166 Plant Biology Building, Michigan State University, East Lansing, MI 48824. MSU is an Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** available for a **BIOCHEMIST/MOLECULAR BIOLOGIST** to investigate molecular events in lymphocyte growth and differentiation. Specific areas include the role of (proto)oncogenes in these events and the differential regulation of genes encoding lymphocyte cell surface antigens. Candidates should have Ph.D. degree and experience in genetic engineering and protein and nucleic acid biochemistry. Send curriculum vitae, one letter of reference and the names of two additional references to: **Dr. William C. Raschke, La Jolla Cancer Research Center, 10901 North Torrey Pines Road, La Jolla, CA 92037.**

**POSTDOCTORAL POSITION IN PLANT DEVELOPMENT/molecular biology**, available January 1988. Work focuses on isolation and characterization of root-specific genes, with emphasis on genes specifying the functions of the root cap. Preference given to applicants trained in the techniques of molecular biology. Send curriculum vitae and names of three references to: **Lewis Feldman, Department of Botany, University of California, Berkeley, CA 94720.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available now with the Department of Agriculture (USDA), Agricultural Research Service (ARS), Tucson, Arizona. ARS is seeking a microbiologist to conduct research on detection of predation by laboratory-reared and wild predators. Knowledge of immunology, biochemistry, and physiology is required; 2-year appointment. Salary commensurate with experience (\$27,172 to \$32,567 per year). For further information contact: Dr. Allen Cohen, 602-629-6220, USDA, ARS, 2000 East Allen Road, Tucson, AZ 85719. For application information/forms contact: Patricia E. Roberts, 301-344-3138, USDA, ARS, Personnel Division, Room 403, Building 003, Beltsville, MD 20705. Applications in response to this ad should be marked RA-87-68. *An Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** in molecular and cellular cardiology—available for M.D. or Ph.D. to study regulation of expression of angiogenic growth factors in cardiac and skeletal muscle. Tissue culture and in vivo models used and experience in recombinant DNA technology, immunohistology, and/or protein chemistry desirable. Send curriculum vitae and summary of research experience to: Dr. Judith Swain, Department of Medicine, Box 3828, Duke University Medical Center, Durham, NC 27710. *Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITION IN AUTONOMIC PHYSIOLOGY** available January 1988 for Ph.D. or M.D. to engage in studies of role of autonomic systems in pathogenesis of obesity and hypertension based upon dietary effects on amine systems of small animals. Two-year Harvard appointment includes training in in vivo assessment of amine systems and in HPLC analytical methods. Send résumé and three references to: Dr. James B. Young, Department of Medicine, Beth Israel Hospital, 330 Brookline Avenue, Boston, MA 02215.

*An Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL POSITION IDENTIFICATION AND CHARACTERIZATION OF ONCOGENES

A fully funded postdoctoral position is available starting 1 January 1988 in the laboratory of Dr. David Steffen in the Department of Cell Biology, Baylor College of Medicine, Houston, Texas. Projects available include the use of murine leukemia virus-induced lymphomas for the identification and isolation of novel oncogenes, and the use of gene transfer protocols to analyze the biochemical function of proto-oncogenes and oncogenes. Experience in molecular biology is highly desirable. Send curriculum vitae and names, addresses, and telephone numbers of three references to: David Steffen, The Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.

**POSTDOCTORAL POSITIONS** in the areas of blood coagulation, complement and neutrophil chemotaxis are available in the Department of Biochemistry. Research on structure-function relationships of the proteins involved with the initiation of coagulation is in the laboratory of Dr. Daryl Fair. Complement research in the laboratory of Dr. Michael Pangburn involves protein and carbohydrate chemistry, fluorescent techniques, kinetics and computer modeling of complement activation. Chemotaxis research in the laboratory of Dr. Richard Painter involves the study of G-protein control of chemotactic peptide receptor-stimulus coupling. Please send curriculum vitae, publications, and names and addresses of three references to the appropriate individual at: Department of Biochemistry, The University of Texas Health Center at Tyler, P.O. Box 2003, Tyler, TX 75710.

**POSTDOCTORAL POSITIONS** in molecular biology as part of a Program Project to construct cDNA libraries of early mouse embryos to identify and characterize genes that regulate early mammalian development. Experience in cloning, DNA sequencing, or in situ hybridization techniques desirable. Please submit résumé and reference letters to: Dr. C. Lo, Biology Department/G5, University of Pennsylvania, Philadelphia, PA 19104.

20 NOVEMBER 1987

# If Research Is What You Do Best . . .

## Break through to a new world of possibilities in biotechnology.

As the innovative leader in today's dynamic industry . . . Biotechnology, Genetics Institute can offer you a research environment that's rich in creativity and entrepreneurial spirit. Whether your background stems from academia or another research setting, we at Genetics Institute encourage our research professionals to explore their talents in a stimulating, scientific atmosphere. It is this type of environment that has enabled our research team to make the kind of contributions deserving of our reputation in the application and creation of recombinant DNA technology.

### Biochemistry

We have an opening for a staff scientist to join the research biochemistry laboratory of our hematopoiesis research program. The successful candidate will be responsible for the purification and characterization of hematopoietic growth factors from recombinant and natural sources. Qualifications include a Ph.D. in biochemistry or related field, 1 year of relevant experience and working knowledge of molecular biology technology.

### Molecular Biology

Applications are invited for postdoctoral candidates interested in studying the involvement of protein kinase C and phospholipase C in the regulation of cell function. The current program is focusing on utilizing a combination of molecular, biochemical and pharmacological approaches such as site directed mutagenesis of protein kinase C and phospholipase C, cDNAs, biochemical analysis of recombinant enzymes as well as the design of phospholipase C inhibitors. The successful candidate will participate in a multidisciplinary research environment including full access to support groups, including peptide synthesis and protein sequencing, immunology, DNA synthesis and nucleotide sequencing laboratories.

### Cellular Immunologist

We are seeking a cellular immunologist interested in the regulation of T cell responses in autoimmunity. The position involves working closely with a molecular biologist to analyze the molecular basis of T cell responses in murine and human assays. Candidates should have a Ph.D. in Immunology or related field with a minimum of 2 years' relevant postdoctoral experience is preferred. Candidates that have relevant graduate research experience will also be considered.

**We offer a stimulating scientific environment in addition to an excellent salary, equity participation, and a complete benefits package. Qualified candidates should forward their resumes, in confidence, to: Barbara Covell, Director, Human Resources, Genetics Institute, 87 Cambridge Park Drive, Cambridge, MA 02140.**

*An Equal Opportunity Employer*

# Genetics Institute



## POSITIONS OPEN

**POSTDOCTORAL POSITIONS** (two) available immediately for recent Ph.D.'s in biochemistry or cell biology to participate in a comprehensive research project of steroid metabolism and glaucoma. The project includes assays for steroid metabolites using HPLC and RIA and cortisol-metabolizing enzymes including the use of antibodies and cDNA. The successful candidates will be part of a multidisciplinary team of basic scientists and clinicians who have been studying the etiology of glaucoma for over 10 years. The laboratory is on the main campus of the Medical School in a suburban setting 30 minutes north of New York City. Send curriculum vitae and the names and telephone numbers of three references to: A. Louis Southren, M.D. or Bernard I. Weinstein, Ph.D., New York Medical College, Cedarwood Hall, Valhalla, NY 10595.

### POSTDOCTORAL POSITIONS: UNIVERSITY OF ALABAMA (UAB)

Two positions available 1 July 1988 for NIDDK training program in cellular physiology with emphasis on modern techniques of membrane transport physiology and biochemistry. Research programs focus on the following areas: epithelial structure and function, ion transport in cystic fibrosis, renal physiology, ion channel biochemistry and reconstitution, electrophysiology of cardiac and pancreatic cells, and electron probe microanalysis. Training faculty include: P. D. Bell, D. J. Benos, K. L. Kirk, R. A. Frizzell, C. S. Pace, R. Rick, G. Saccomani, J. A. Schafer, R. L. Shoemaker, and W. T. Woods. Applicants must be U.S. citizens or permanent residents and have a Ph.D., M.D., or D.V.M. degree. Submit applications (including 2-3 letters of reference) to: Dr. D. J. Benos, Department of Physiology and Biophysics, University of Alabama at Birmingham, University Station, Birmingham, AL 35294. An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL POSITIONS AVAILABLE;** one position is to investigate opiate-generated transmembrane signals and the biochemical correlates of drug dependence. The second position is to study novel anticonvulsant binding sites in the CNS. Priority will be given to scientists with experience in molecular biology, protein chemistry and enzymology. Salary commensurate with experience. Submit research interest, curriculum vitae and three references to: Dr. Jose M. Musacchio, Professor and Acting Chairman, Department of Pharmacology, NYU Medical Center, 550 First Avenue, New York, NY 10016. Equal Opportunity/Employer M/F.

### POSTDOCTORAL POSITIONS IN CANCER BIOLOGY UNIVERSITY OF ARIZONA AND ARIZONA CANCER CENTER TUCSON, ARIZONA

The University of Arizona Committee on Cancer Biology is seeking candidates for two postdoctoral positions funded by a National Cancer Institute training grant. Research programs of the 26 participating faculty include basic studies in the biochemistry, molecular and cellular biology, and immunology of cancer, carcinogenesis, tumor biology, molecular and cytogenetics, and cancer prevention and treatment. Candidates should indicate specific interests and send curriculum vitae and the names of references to: Dr. Eugene W. Gerner, Radiation Oncology Department and Cancer Center, University of Arizona Health Sciences Center, Tucson, AZ 85724. An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL RESEARCH ASSOCIATE,** instrumentation and programming for plant effects research. Position is available immediately. Studies include effects of application of carbon dioxide, ozone, and other pollutants to plants in open air settings. Individual selected will be responsible for analysis of atmospheric gases, database programming and analysis, and may contribute to a multi-institutional effort in systems modeling. Position requires a high degree of skill in BASIC and FORTRAN programming, and analytical instrumentation. Development of new research proposals will be encouraged. Send curriculum vitae, that includes publication list, and names of three references to: Dr. George R. Hendrey, Department of Applied Science, Terrestrial and Aquatic Ecology Division, Building 318, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, NY 11973. Equal Opportunity Employer M/F.

## RESEARCH AND DEVELOPMENT OPPORTUNITIES

The Dade Division of Fortune 100 Baxter Healthcare Corporation is a leading supplier of diagnostic products and instrumentation for clinical laboratories, with facilities in the U.S., Europe and Puerto Rico. We currently have two exceptional opportunities for high level R&D Directors in our Research and Development area.

Both incumbents will report directly to the V.P. of R&D and will be responsible for R&D project management, strategic planning and new product development and introductions. In conjunction with the above responsibilities, the selected candidates will serve on major advisory councils within the U.S. and internationally.

### DIRECTOR — Instrument Systems Development

The selected individual will lead a large team of engineers and scientists in the Research and Development of Diagnostic Instruments. A Ph.D. is desired, preferably in disciplines such as Biochemistry, Physical Chemistry, Engineering, etc., along with a proven track record of product development. Approximately 8-12 years experience with immunodiagnostics and/or coagulations system experience is preferred.

### DIRECTOR — Reagent Development

The incumbent will be responsible for directing a staff of scientific professionals in design, development and evaluation of enzyme immunoassays. 8-12 years experience in broad areas of complex immunodiagnostic systems design and the development of clinical laboratory reagents is desired, along with a Ph.D. in chemistry, biology or biochemistry.

Each position requires a combination of broad technical knowledge with strong managerial skills and excellent interpersonal and communication skills.

The Dade Division is based on the beautiful east coast of South Florida where, in addition to paying no state or local income taxes, you will enjoy a year round quality lifestyle which attracts new residents and visitors from around the world.

Baxter offers a stimulating career opportunity where contributions are recognized and rewarded. For confidential consideration, please forward your c.v. to **Professional Staffing, Baxter Healthcare Corporation, Dade Division, P.O. Box 140520, Coral Gables, FL 33114.** Equal Opportunity Employer.

Dade Division

**Baxter**

## RESEARCH SCIENTIST

The Diagnostics Group (Ames) of Miles, Inc., a leader in Medical Diagnostics, is currently seeking a Research Scientist in our Immunodiagnostics Research and Development Laboratory.

Candidates must have a Ph.D. (or the equivalent in education and experience) in Microbiology, Biochemistry, or Molecular Biology along with postdoctoral or industrial research experience in bacterial antigen isolation, purification and characterization techniques.

The candidate will conduct isolation, purification and characterization of bacterial antigens and support ongoing immunoassay development work. Work will also involve planning and conducting research, analyzing data and collaborating with current project personnel.

Located in Elkhart, Indiana, we offer varied recreational and educational facilities as well as convenient accessibility to the Chicago area. Starting salary commensurate with experience, plus an excellent benefits program. Relocation benefits paid by the company.

Please send a complete resume in confidence to:

Linda Heiland  
Sr. Personnel Representative  
Department 257  
Miles, Inc.  
P.O. Box 40  
Elkhart, IN 46515

AN EQUAL OPPORTUNITY EMPLOYER M/F/H





**GLAXO INSTITUTE FOR MOLECULAR  
BIOLOGY S.A.  
GENEVA, SWITZERLAND**

The Glaxo Institute for Molecular Biology has a staff of over 100 in well-equipped facilities in Geneva, Switzerland. We are part of the Glaxo group—Britain's largest pharmaceutical organization which has an outstanding reputation for the quality of its products and its research.

The Institute provides the molecular biological basis for discovering effective new medicines for major therapeutic areas. Our interests centre currently on inflammatory diseases, fungal and viral therapeutics and regulation of cell proliferation and differentiation.

The Institute collaborates on a project basis with Glaxo Group Research Ltd and has links with the other centres of research within the Glaxo Group.

We are currently expanding our research group and are looking for highly qualified scientists to join the experienced team at the Institute. Candidates should have post-doctoral experience and a proven track record in research. In addition, we are offering a number of post-doctoral fellowships for basic research projects.

**Molecular Biologists**

1. Investigation of HIV genes.
2. Control of gene expression in animal cells.
3. Gene isolation and expression.
4. To lead group in nucleic acid sequencing.

**Yeast Geneticist**

Classical and molecular yeast genetics.

**Microbiologist**

Microbial biochemist to study fungal metabolism.

**Cell Biologists**

1. Lymphokine mode of action.
2. Cellular immunologist.
3. Immunologist to work on monoclonal antibodies.
4. Development of recombinant animal cell lines.
5. Large scale tissue culture.

**Protein Chemists**

1. Protein structure, to take charge of amino-acid microsequencing.
2. Purification and characterization of proteins from natural sources.

**Postdoctoral Fellowships**

Interesting project opportunities exist for positions tenable for two years, extendable to three.

We offer an excellent salary and benefits package, with opportunities for career development, in one of the most attractive parts of Europe.

Please write with a full curriculum vitae, list of publications and the names of three references, indicating the position you are interested in, to **Rita Gloor, Personnel Manager, GLAXO INSTITUTE FOR MOLECULAR BIOLOGY S.A., 46, ROUTE DES ACACIAS, 1227 GENEVA, SWITZERLAND.**

All replies will be evaluated in strict confidence.

## POSITIONS OPEN

### POSTDOCTORAL POSITIONS

We seek to fill two research positions at the postdoctoral level to study the molecular regulation of gene expression in T lymphocytes. The ongoing area of research involves definition of novel and recombinant proteins that mediate T cell function in collaboration with other laboratory investigators. An appointment is available in an appropriate department of the Harvard Medical School.

Send curriculum vitae and names of two references to: Susan Forgiione, or call 617-732-3348. Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115. An Affirmative Action/Equal Opportunity Employer.

**POSTDOCTORAL/RESEARCH ASSOCIATE POSITION** available immediately for Ph.D. or M.D. to study the influence of the extracellular matrix on neoplastic cell differentiation. Applicants with interest in cell biology or biochemical aspects of the project are encouraged to apply. Please submit curriculum vitae, a brief description of research experience, and three letters of reference to: Dr. Sharon Luikart, Department of Medicine, University of Minnesota Hospital and Clinics, Minneapolis, MN 55455. We are an Equal Opportunity Employer.

### POSTDOCTORAL RESEARCH ASSOCIATE

Position available January 1988 to work on mononuclear phagocyte differentiation. Ph.D. degree in biochemistry or cell biology required. Experience in monoclonal antibody preparation, protein purification and analysis, cell culture, immunological assays, and handling of laboratory animals desirable. Salary dependent on experience. Applications accepted until 31 December 1987. Send curriculum vitae and names of three references to: Dr. Alvin Volkman, Department of Pathology, East Carolina University School of Medicine, Greenville, NC 27858. Federal law requires proper documentation of identity and employability prior to final consideration for these positions. Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL RESEARCH ASSOCIATE POSITION** for the study of motile systems in muscles and cells. Projects include regulation of actomyosin ATPase, mechanism of kinesin-microtubule ATPase, functions of motile systems in cell division. Experience in protein biochemistry or cell and molecular biology preferred. Send curriculum vitae and names of references to: Dr. E. W. Taylor, Department of Molecular Genetics and Cell Biology, The University of Chicago, 920 East 58th Street, Chicago, IL 60637. An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL RESEARCH ASSOCIATE:** Faculty position is available for recent Ph.D. graduate in biochemistry to work in intracellular events and factor-cell interactions of human leukemia cell differentiation with regulator lymphokines; and interactions between leukemia and immune cells.

Training and experience in receptor and protein biochemistry is desirable. Send a curriculum vitae to: Professor J. W. Chiao, Department of Medicine, New York Medical College, Valhalla, NY 10595 (located 30 miles north of New York City).

### POSTDOCTORAL STUDENT OPPORTUNITY

Postdoctoral student to investigate aspects of disease resistance to Gram-negative infection particularly the role of outer membrane antigens and its influence on the myeloid system. Past experience in some of the following areas: immunology, antigen identification and separation; hematology and cell culture would be an asset.

Preferred candidates will have a Ph.D. and qualifications in Life Sciences or Veterinary Medicine.

The starting date is early 1988 and the funding presently available is for 3 years. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. Candidates should submit their curriculum vitae with names and addresses of three references to: Dr. P. B. Little, Department of Pathology, Ontario Veterinary College, University of Guelph, Guelph, Ontario, Canada N1G 2W1, Telephone: 519-823-8800, Extension 4645.

## POSITIONS OPEN

**POSTDOCTORAL/RESEARCH ASSOCIATE MOLECULAR ENDOCRINOLOGY** position to study the role of growth factors/protooncogenes in the regulation of growth by estrogenic hormones. Experience in one or more of the following areas is desirable: Reproductive endocrinology, hormone/growth factor receptors, mRNA analysis, and antibody production/use. Salary and appointment are negotiable based upon experience. Kindly forward a summary of background/career goals, curriculum vitae, and names, addresses, and telephone numbers of three references to: George M. Stancel, Department of Pharmacology, University of Texas Medical School at Houston, P.O. Box 20708, Houston, TX 77225. An Equal Opportunity Employer. Women and minorities are encouraged to apply.

### PREDOCTORAL AND POSTDOCTORAL VIROLOGY POSITIONS UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA) SCHOOL OF MEDICINE

The Department of Microbiology and Immunology, UCLA School of Medicine, invites applications for training positions in virology. Research programs include the cellular and molecular basis of latency and pathogenesis of herpes simplex viruses (Jack G. Stevens), molecular biology of influenza viruses and transport of glycoproteins (Debi P. Nayak), gene regulation and transformation by papillomaviruses (Felix O. Wettstein), molecular mechanism of viral persistence (Rafi Ahmed), molecular biology of picornaviruses (Asim Dasgupta), molecular genetics and pathogenesis of human retroviruses (Irvin Chen), and molecular basis for transcriptional activation of herpesvirus genes (Lawrence T. Feldman). Stipends available. For predoctoral training leading to the Ph.D. degree, contact: Dr. Dexter Howard; and for postdoctoral positions, contact: Dr. Debi Nayak, Department of Microbiology and Immunology, UCLA School of Medicine, Los Angeles, CA 90024.

An Equal Opportunity/Affirmative Action Employer.

**PROFESSOR-IN-CHARGE, LEOPOLD CENTER FOR SUSTAINABLE AGRICULTURE**—Iowa State University seeks outstanding scientist and administrator for newly created research center. Responsibilities: administer interdisciplinary research; secure program support; conduct personal research. Qualifications: Ph.D. or equivalent in related discipline; administrative experience; superior research record; success in obtaining grants. Salary and academic rank commensurate with qualifications. Nominations welcome. Submit résumé of education, research accomplishments, publications, and three references to: Dr. James L. Baker, 109 Davidson Hall, Iowa State University, Ames, IA 50011. Deadline 15 December 1987 or until position filled. Equal Opportunity Employment Employer.

**RESEARCH ASSOCIATE** to participate in ongoing studies of  $Ca^{2+}$ -mediated signal transduction in human platelets. Research involves the identification and characterization of novel calmodulin-binding proteins and investigating the role of  $Ca^{2+}$ -dependent proteolysis as it relates to calmodulin-dependent reactions (see *Biochemistry* 26, 2766-2773). Ph.D. in biochemistry or related discipline with experience in protein chemistry and enzymology. Send letter of application, curriculum vitae, relevant publications, and names of three references to: Dr. Robert W. Wallace, Department of Pharmacology, University of Alabama at Birmingham, (UAB) Birmingham, AL 35294. UAB is an Affirmative Action/Equal Opportunity Employer.

**RESEARCH ASSOCIATE OR ASSISTANT.** Department of Medicine, Section of Rheumatology/Immunology. Candidate should have experience in cell culture techniques, modern constructs of biochemistry, immunology, and molecular biology to research autoantigens associated with autoimmune connective tissue diseases. Experience in cloning and hybridoma technology highly desirable. Salary commensurate with training and experience. Screening to begin 15 December 1987. Send curriculum vitae to: Section Head, Department of Medicine, Rheumatology/Immunology, East Carolina University School of Medicine, Greenville, NC 27858-4354. Affirmative Action and Equal Opportunity Employer. Federal Law requires proof of identity and employment before final consideration.

## POSITIONS OPEN

### PROCESS ENGINEER

Design and engineering of spray dryers and evaporators and other related processing equipment for food and dairy and agricultural industries. Selection and design of suitable processes and process parameters in order to satisfy customer requirements. Collection and analysis of data from operating installations to improve the engineering design basis of the system. Provide engineering design basis for new processes for evaporators and spray dryers and related process equipment using knowledge of thermodynamics, flow dynamics, process control technology, aerodynamics, evaporator and spray dryer technology, heat recovery, and suspended particle processing. Provide process engineering assistance for start-up, commissioning and trouble shooting of customer plants and other site process management.

Minimum required: 4 years in job offered or 4 years as spray dryer and evaporator process engineering involved in centrifugal vapor recompressors and suspended particle processing. \$48,250 per year for 40-hour week, approximately 10 hours overtime. Send résumé to: Sue Henning, Eau Claire Job Service Office, 418 Wisconsin Street, Eau Claire, WI 54702.

Employer Paid Ad

### RESEARCH POSITION

Permanent research biochemist position, section leader, at a University hospital for bench-work oriented individual with quantitative working habits for in-depth investigation of carbohydrate moieties of human cell membrane glycoconjugates. Doctorate required. Technical help can be hired. Starting salary range: \$32,500 to \$42,000, depending upon experience; excellent benefits; significant annual salary increases, and paid attendance of meetings, including overseas. Position is not dependent on grants. Please send résumés to: Dr. Georg F. Springer, Director, Immunochemistry Research Department, Evanston Hospital, 2650 Ridge Avenue, Evanston, IL 60201.

Equal Opportunity Employer M/F.

### RESEARCH SCIENTIST OR SENIOR RESEARCH SCIENTIST PROKARYOTIC GENOME ANALYSIS

The Center for Prokaryotic Genome Analysis (CPGA), University of Illinois at Urbana-Champaign (J. Konisky and C. Woese, Co-directors) seeks a qualified individual to participate in the sequencing of archaeobacterial genomes.

The CPGA comprises scientists whose interests span molecular biology, microbiology, evolution, computer sciences, mathematics and electrical/computer engineering. Its members derive from several University of Illinois departments as well as other major research universities in the United States and Canada. Support for the Center derives in part from a NSF Biology Facilities Award. The main goal of the CPGA is to determine the sequences of archaeobacterial genomes, using these to better understand the evolution of the cell, phylogenetic relationships in general, mechanisms of genome evolution as well as gene structure and function. The Center will be particularly concerned with the development of proper procedures for the analysis of sequence data.

Applicants should be Ph.D. level with postdoctoral experience in molecular biology, genetics, microbiology or a related field. They should have expertise in all aspects of DNA sequencing, and be fully capable of directing a staff of six to eight support personnel. A background in related areas such as computer applications, instrumentation, oligonucleotide synthesis is also desirable.

Salary is negotiable based on experience. Full-time position. Title will be based on experience. Starting date is 1 March 1988.

Applicants should send curriculum vitae including a full description of experience, relevant reprints and the names of three referees to: Dr. Jordan Konisky, Center for Prokaryotic Genome Analysis, Department of Microbiology, University of Illinois, Urbana, IL 61801; telephone: 217-333-1142.

Closing date for applications is 15 December 1987. Interviews may be conducted before that time, but all applications received before 15 December 1987 will receive full consideration.

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

## POSITIONS OPEN

**RESEARCH SCIENTIST:** The Division of Pulmonary Medicine at Long Island Jewish Medical Center is seeking a Ph.D. who has demonstrated ability to pursue independent research to direct the pulmonary laboratory. Potential collaborative areas of interest include endothelial cell injury, erythropoietin physiology, and surfactant secretion. Continuous funding is available through the Nina Weisman Foundation. Faculty appointment at SUNY, Stony Brook commensurate with experience and publications. Interested applicants should send their curriculum vitae along with three letters of recommendation to: **Harry Steinberg, M.D., Division of Pulmonary and Critical Care Medicine, Long Island Jewish Medical Center, New Hyde Park, NY 11042. An Equal Opportunity Employer.**

## POSITIONS OPEN

### RESEARCH TECHNICIAN

The Biological Sciences Section of the Garst Seed Company, a member of the ICI's International Seeds Business, is seeking candidates for B.S./M.S. level positions to conduct restriction fragment length polymorphism (RFLP) analysis of maize. Applicants must have experience with standard molecular biology procedures and will ideally have experience of genetic screening and/or genetic analysis. The research will be conducted at Slater (10 miles south of Ames), Iowa. Salary and benefits will be competitive. Send résumé to: **Bioscience Section Secretary, Garst Seed Company, Research Department, P.O. Box 500, Slater, IA 50244. The Garst Seed Company is an Equal Opportunity Employer.**

## POSITIONS OPEN

**RESEARCH ASSOCIATE IN HEART DEVELOPMENT** specifically the physiology and morphogenesis of the embryonic cardiovascular system. Knowledge and experience in cardiac embryology, cardiovascular physiology, scanning and transmission electron microscopy, photomicroscopy, and microsurgery in the embryo including use of the servo-null pressure system and pulsed-Doppler velocity meter. Experience in computer programming, biostatistics, and data management essential. Individual will assist in the teaching of postdoctoral fellows, and preparation of grants and technical reports. Education requirement is a master's degree. Experience required is 7 years in cardiopulmonary development. Faculty appointment in the service track, salary negotiable. Send curriculum vitae and two letters of reference within 30 days to: **Edward B. Clark, M.D., Chief of Pediatric Cardiology, Box 631, University of Rochester School of Medicine, Rochester, NY 14634. Telephone: 716-275-4661. Equal Opportunity/Affirmative Action Employer.**

**RESEARCH INSTRUCTOR** in allergy-immunology. M.D. required, M.Sc. or Ph.D. in biochemistry. Research involves biochemistry of human lymphocyte activation. Salary \$33,000 per year. Send curriculum vitae to: **Raif S. Geha, M.D., The Children's Hospital, 300 Longwood Avenue, Boston, MA 02115.**

### SCIENTIFIC PROGRAMMING

Fein-Marquart Associates is a small, established, computer software research and development firm specializing in scientific programming and database systems, especially chemical information systems and laboratory information management systems. Projects vary in size and use a variety of sophisticated computer environments—from microcomputers to large mainframes.

As part of its current expansion, FMA seeks experienced **PROGRAMMERS** with scientific degree(s) and Fortran experience.

Please send résumé to: **Fein-Marquart Associates, Inc., 7215 York Road, Baltimore, MD 21212; telephone: 301-821-5980.**

### LIPOGEN, INC.

A rapidly growing biotechnology firm located at the beautiful foothills of the Smoky Mountains is looking for two Ph.D. **SCIENTISTS** to join the R&D of diagnostic and therapeutic products based on molecular cloning and liposome technologies. Excellent compensations and career development opportunities. Relationship with the nearby University of Tennessee is excellent.

1) **Molecular biologist:** bacterial or yeast expression vector construction; cloning of mammalian genes for large-scale production of proteins and glycoprotein, biochemical characterizations of the cloned proteins.

2) **Liposomologist:** in-depth knowledge of physical chemistry of lipids; working experience with liposomes; immunochemistry of antibody purification and chemical modifications; immunoassay.

Please send curriculum vitae to: **Dr. Leaf Huang, LipoGen, Inc., 10515 Research Drive, Knoxville, TN 37932.**



### STAFF SCIENTIST

The Chemical Industry Institute of Toxicology (CIIT), an innovative leader in toxicology research, is seeking a scientist with an interest in chemical injury to the lung. The successful candidate will establish an independent research program to elucidate the biological mechanisms of chemical-induced pulmonary toxicity with emphasis on biochemical, molecular, and cellular alterations. Multidisciplinary collaborative support is available in the areas of pathology, inhalation exposure, cell culture, and molecular biology.

Applicants should have a Ph.D. in biochemistry, cell biology, molecular biology, or related discipline and several years of postdoctoral research experience.

Please send complete résumé to:

**Employment Office  
CIIT**

**P.O. Box 12137**

**Research Triangle Park, NC 27709**

*An Equal Opportunity/Affirmative Action Employer*

# LONZA

We are a versatile and internationally recognized chemical concern with worldwide contacts. The Research and Development department of our Organic Intermediates and Fine Chemicals division is actively recruiting a

## fermentation microbiologist/ biotechnologist

Successful Candidates will have a Ph.D. degree with a minimum of two years experience in industrial scale fermentation or relevant post-doctoral research work. The position requires self motivated individuals who are fluent in German and willing to bridge the gap between laboratory advances and commercial production.

We offer:

- Modern laboratories and pilot plant
- A fully integrated literature service
- Modern employment condition
- An attractive benefits package

If you have the necessary qualifications we would like to get to know you. Please send us your written application.

**LONZA AG, Walliser Werke**  
Personalabteilung  
CH-3930 Visp  
☎ Switzerland/028/48 53 49



# Monoclonal Antibody Development

Cetus Corporation, a front-runner in the field of biotechnology, seeks a highly qualified scientist to develop monoclonal antibodies for research and diagnostic applications.

The successful candidate will join our Department of Immunology in Palo Alto, California. He/she will supervise a well-equipped laboratory and technical group developing monoclonal antibodies to a wide variety of microbial, viral and cellular antigens. Position requirements are a Ph.D and a background in immunology and biochemistry, plus a familiarity with techniques for immunization, fusion, hybridoma screening and antibody purification and characterization.

Additional opportunities exist for BS/MS level technical staff in the monoclonal antibody development group.

Please send your resume in confidence to:

**Cetus Corporation**  
Box DRS  
1400 Fifty-Third Street  
Emeryville, CA 94608

An equal opportunity/  
affirmative action employer.



# POSTDOCTORAL FELLOWSHIP IN MOLECULAR IMMUNOLOGY

DNAX RESEARCH INSTITUTE has an opening for a postdoctoral scientist to work in the laboratory of Dr. Gerard Zurawski on structure-function relationships of lymphokines and their receptors. The project emphasizes molecular mutagenic analyses of the receptor-ligand interaction. The ideal candidate will have completed a Ph.D in Biochemistry or Chemistry and have experience in purification, chemical modification and physical analysis of proteins.

DNAX is supported by Schering-Plough Corporation and operates as a separate research institute committed to basic research in immunology and molecular biology. The institute provides a unique resource for productive collaborative efforts between Immunologists and Molecular Biologists in a generously funded and open academic-like atmosphere. Postdoctoral fellows are encouraged to interact with other scientists at DNAX, and, where appropriate, with members of the Scientific Advisory Board and scientists at universities. DNAX two-year postdoctoral fellowships have generous stipends and benefits.

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

Human Resources Department,  
DNAX Research Institute of  
Molecular and Cellular Biology,  
901 California Ave., Palo Alto,  
California. 94804-1104.

**DNAX**

# COMPARATIVE PATHOLOGIST D.C.M.

The Division of Comparative Medicine at MIT is seeking a Pathologist.

**DUTIES:** Provide diagnostic pathology support and research support for the lab animal program at MIT and other Boston biomedical facilities, participate in the teaching and training of postdoctoral students; and collaborative research with an emphasis on recognizing and defining abnormal physiologic diseases of interest to biomedical researchers.

**QUALIFICATIONS:** DVM with 2 to 4 years in a pathology training program or graduate school. ACVP board certification or eligibility and demonstrated research ability. Strong interest in comparative medicine and experimental pathology.

Send resume to and cover letter to: **Dr. James G. Fox, Division of Comparative Medicine, RM 45-106, Massachusetts Institute of Technology, Cambridge, MA 02139.**

MIT is a non-smoking environment.  
MIT is an equal opportunity/affirmative action employer.  
Women and minorities are encouraged to apply.

**A COMMUNITY AT WORK**

**MIT**

# Research Associates

Maimonides Medical Center, a progressive 700 bed teaching hospital, has POST DOCTORAL RESEARCH ASSOCIATE positions available in the following areas:

## MOLECULAR BIOLOGY

The selected candidate will perform recombinant DNA techniques in the fields of virology, and immunology. Research will involve viral gene amplification and detection (in situ hybridization).

## IMMUNOLOGY

The successful candidate will study cellular and humoral immune mechanisms in the area of auto-immunity diseases of the CNS. Experience in Protein Purification, T Cell Cloning, and/or Suppressor T Cell Assay desirable.

The above positions will be available beginning January 1st, 1988 and offer salaries in the \$28K to \$35K range, excellent fringe benefits, and an attractive Brooklyn location just 20 minutes from midtown New York City.

Please send C.V. and letters of reference to:

**DR. F. MOKHTARIAN**  
Associate Professor and Director,  
Division of Virology/Immunology  
DEPARTMENT OF MEDICINE



**Maimonides Medical Center**

4802 Tenth Avenue  
Brooklyn, New York 11219

We are an equal opportunity Employer M/F

## Biotechnology Scientists

**NYGene**, an expanding and innovative biotechnology products and instrumentation company, is seeking scientists. Industrial experience is preferred.

### Bioseparation and Affinity Chromatography

- Ph.D. with expertise in protein purification and characterization to lead a scientific staff.
- MS/BS in Chemistry or Biochemistry.

### Cell Culture and Hybridoma Technology

- Ph.D./MS with expertise in cell biology and monoclonal antibody production.

### Reagent and Assay Development

- Ph.D. experienced in all aspects of reagent development and production.
- MS/BS for immunoassay development.

### Quality Control

- An individual experienced in all phases of biological products and/or instrumentation development with a demonstrated ability to build a QC Department.

Send resume and salary history, indicating position of interest to: NYGene Corporation, 1 Odell Plaza, Yonkers, NY 10701.

# NYGENE

An equal opportunity employer.

## R&D PROJECT MANAGER CANCER DIAGNOSTICS

If you are looking for an opportunity to run your own project in a team that works together, to be responsible for the research, development and market introduction of new cancer diagnostic products, this could be the chance of a lifetime. We have recently acquired exclusive worldwide rights to a new, patented ovarian cancer marker and are looking for the right person to bring this and other new cancer diagnostics to the oncologist.

You should have experience in cancer diagnostic research with emphasis on monoclonal antibody and immunoassay development. Experience managing clinical studies with expertise in biomedical statistical analysis is highly recommended. Academic background should include a Ph.D. in biochemistry/immunology. The position reports directly to the Vice President of Research and Development and includes generous equity participation and eligibility in our management bonus plan.

We are DIANON Systems, a four year old, privately-held, cancer diagnostics company located in Stratford, CT. A rapidly growing leader in our field, we bring innovative diagnostic products and services to oncologists and clinicians engaged in cancer research.

Candidates interested in exploring this opportunity should send their curriculum vitae with pertinent publications to: Richard S. Foemmel, Ph.D., V.P. Research and Development at DIANON Systems, Inc., 555 Lordship Boulevard, Stratford, CT 06497-7124.

## DIANON SYSTEMS

Diagnostic Innovations for Oncology

An equal opportunity employer

## TWO APPOINTMENTS IN MACROMOLECULAR CRYSTALLOGRAPHY

The Department of Chemistry of the UNIVERSITY OF PENNSYLVANIA together with the WISTAR INSTITUTE OF ANATOMY AND BIOLOGY announce the formation of a joint facility for macromolecular crystallography. Two appointments will be made as early as the Spring of 1988, at the Assistant Professor rank. One position will be a tenure track appointment in the Department of Chemistry, while the other position will involve a primary faculty appointment at the Wistar Institute. Candidates should have demonstrated research and teaching potential. Our institutions are prepared to offer generous laboratory start-up packages.

We offer competitive salaries and comprehensive benefits packages. Three letters of recommendation should be sent to either of the search committees. Also send curriculum vitae, publications, and a brief description of research interests. Applications will be considered as they are received. The search will remain open until both positions are filled.

Biological Search Committee  
Department of Chemistry  
University of Pennsylvania  
Philadelphia, PA 19104



THE  
WISTAR  
INSTITUTE

Structure Search Committee  
The Wistar Institute  
36th at Spruce Street  
Philadelphia, PA 19104

The University of Pennsylvania and The Wistar Institute are equal opportunity employers M/F

## Analytical Chemist

The Analytical Chemistry Department of Smith Kline & French Laboratories, located in a new state-of-the-art research facility near Valley Forge, Pennsylvania, is seeking an Associate Senior Investigator to:

- plan the analytical approach and if necessary develop new methodology to solve specific problems involving biopharmaceuticals.
- apply state-of-the-art analytical techniques including HPLC, GC, ion chromatography to assay biopharmaceutical drug substances.

Candidates are required to have:

- a Ph.D. in Analytical Chemistry preferably with postdoctoral experience.
- experience with gas chromatography, HPLC and trace analysis.
- excellent written and verbal communication skills
- experience with analysis of biopharmaceutical drug substances is desirable.

We offer excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. Publication of research results is encouraged and supported. For confidential consideration, please forward your C.V. and names of three references to Robert F. Obst, Manager, Personnel Relations, R0113, Smith Kline & French Laboratories Research and Development Division, P. O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

# SK&F

A SmithKline Beckman Company

## POSITIONS OPEN

### SENIOR RESEARCH ASSOCIATE

Intellectually challenging academic research position with both long-term career and leadership potential. A qualified candidate should be in early thirties, hold the Ph.D. degree (American or U.K. School) having had at least one previous postdoctoral experience. Background necessary in either cell biology or protein biochemistry. Possibility open for development of independent project work within context of general goals of the group. Salary and fringe benefits competitive. Send curriculum vitae and references to:

G. I. Research Unit  
Research Institute, M-3  
Cleveland Clinic Foundation  
9500 Euclid Avenue  
Cleveland, OH 44106

*An Equal Opportunity Employer M/F/H.*

**SENIOR RESEARCH SCIENTIST.** Ph.D. in virology/microbiology required. Seeking an experienced highly qualified virologist willing to work with human immunodeficiency virus in a laboratory setting. Strong molecular biology background essential with capability to develop and carry out AIDS research projects. Please send curriculum vitae and names of three references to: **Dr. A. E. Friedman-Kien, Department of Microbiology, NYU Medical Center, 550 First Avenue, New York, NY 10016.** *Equal Opportunity Employer M/F.*

**SURFACE CHEMIST/MINERALOGIST.** The University of Wisconsin, Department of Soil Science invites applications for a tenure-track assistant professor position. The candidate is expected to develop an innovative research program that uses modern instrumental techniques to characterize the surface properties of the soil solid phase. The research will involve collaboration with investigators in the College of Agricultural and Life Sciences, the Materials Science Center, and others. Teaching responsibilities include advanced soil mineralogy. Applicants should submit curriculum vitae, a summary of proposed research, and should arrange to have three letters of recommendation sent to: **Professor Philip A. Helmke, Department of Soil Science, University of Wisconsin, Madison, WI 53706.** Applications should be received by 15 January 1988, to be assured full consideration. *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

### SYSTEMS ECOLOGIST

The Energy and Environmental Systems Division, Argonne National Laboratory, is seeking a systems ecologist with demonstrated expertise in modeling terrestrial systems altered by human activity. Preference will be given to those individuals with research experience in vegetation dynamics, ecosystem/landscape analysis, or terrestrial system response to cumulative disturbances. The successful candidate will work with a multidisciplinary group of environmental scientists. Ph.D. required; salary competitive. For prompt consideration, send detailed résumé and qualifications, including salary history, to:

Rosalie L. Bottino  
Box J-EES-30290-55  
Argonne National Laboratory  
9700 South Cass Avenue  
Argonne, IL 60439

*Argonne is an Equal Opportunity/  
Affirmative Action Employer*

### TECHNOLOGY CURATOR

Responsible for developing exhibits on all aspects of contemporary technology at major science-technology center. Reports to Deputy Director. Requires significant project management experience, ability to communicate complex topics to general public, excellent writing and interpersonal skills. Minimum requirements: Ph.D. in technology-related field, 3 years of college teaching, and 1 year of relevant administrative experience. Send letter and résumé by 18 December 1987 to: **Ms. Elizabeth Sims, Personnel Officer, California Museum of Science and Industry, 700 State Drive, Los Angeles, CA 90037.** *Equal Opportunity Employer.*

## POSITIONS OPEN

The University of Alaska Fairbanks, Juneau Center for Fisheries and Ocean Science, is seeking applicants for a **TENURE-TRACK FACULTY POSITION** in the area of management of renewable aquatic resources. The appointment will involve research and/or supervision on the graduate level. Research will include emphasis on Alaskan fishery resources including salmon, herring, groundfish, and shellfish with special attention to the Gulf of Alaska and the Bering Sea; development of information gathering and processing for real-time decision making; optimization techniques for determining best compromise among conflicting management objectives in mixed stocks and multi-species fisheries; assessment, enumeration, and stock identification of fish populations; recruitment processes and fisheries oceanography; multi-species interaction and disruption of stable predator/prey assemblages by fisheries exploitation; role of predation by piscivores in fish population dynamics. Applications should be received by 15 January 1988. Applicants should send a statement of interest, curriculum vitae, and the names and addresses of three references to:

Search Committee  
Ole Mathisen, Chair  
c/o School of Fisheries and Ocean Science  
University of Alaska Fairbanks  
Fairbanks, AK 99775-1080

*The University of Alaska is an Equal Opportunity/Affirmative Action Employer and educational institution; your application for employment with the University of Alaska may be subject to public disclosure if you are selected as a finalist.*

### TENURE-TRACK FACULTY POSITION IN APPLIED BIOMATHEMATICS AND COMPUTER SCIENCE

The University of Pennsylvania School of Veterinary Medicine is seeking applicants having credentials in applied biomathematics and computer science to join its professorial faculty. Qualified individuals must have an advanced degree in biomedical or agricultural science and a doctorate in mathematics, computer science or physics, in addition to demonstrated ability to lead an academic program in biomathematics, statistics and computer science in a veterinary or animal science environment. Major emphasis will be placed on the candidate's experience in development of computer software for mathematical modeling and its application to understanding the behavior of biological systems at the cellular, whole organism and population level. The successful candidate will participate in existing programs in integrated animal health outreach, food animal epidemiology and health economics and clinical nutrition. Experience in modeling applications in a variety of biomedical and agricultural systems is desirable.

The candidate will be expected to develop a viable academic program in computer science and applied biomathematics and provide leadership in the establishment of computer facilities in the School of Veterinary Medicine. The individual would also be expected to develop interdisciplinary collaborative programs in computer and biomedical sciences with other schools of the University and elsewhere beyond the Veterinary School. Demonstrated ability to direct major computer software development projects and obtain competitive research support is essential.

Qualified applicants should submit curriculum vitae and names of five referees to:

Dr. Robert H. Whitlock, Chairman  
Department of Clinical Studies, New Bolton Center  
University of Pennsylvania  
School of Veterinary Medicine  
382 West Street Road  
Kennett Square, PA 19348

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

Science/Technology Policy. **TENURE-TRACK POSITION** (pending budgetary approval). Emphasis on science and technology in industrial societies. Ph.D. required. Rank open. Begin September 1988. Send letter, curriculum vitae, sample of scholarly work, three references, by 15 January 1988 to: **Chair Policy Search, Science, Technology, and Society Program, Michigan Technological University, Houghton, MI 49931.** *Women and minorities encouraged to apply. Michigan Technological University is an Equal Opportunity Educational Institution/Equal Opportunity Employer.*

## POSITIONS OPEN

### TENURE-TRACK POSITION FOR MOLECULAR VIROLOGIST AT THE UNIVERSITY OF PITTSBURGH

The Department of Ophthalmology offers an excellent academic opportunity for a molecular virologist to associate with an active herpesvirus laboratory. A Ph.D. and postdoctoral fellowship is required. Experience with HSV, VZV, or CMV is desirable. A joint appointment in the Department of Microbiology, Biochemistry, and Molecular Biology of the School of Medicine is anticipated. The position offers generous startup support (2 to 3 years), an outstanding new physical facility and a stimulating scientific environment. Additional details are available from **Y. Jerold Gordon, Director of the Campbell Microbiological Laboratory, The Eye and Ear Institute of Pittsburgh, 203 Lothrop Street, Pittsburgh, PA 15213, telephone: 412-647-2212.** *An Equal Opportunity/Affirmative Action Employer.*

**TERRESTRIAL ANIMAL ECOLOGIST**—tenure-track position open in fall 1988, for assistant or associate professor. Candidates must have Ph.D. with research abilities (as demonstrated by publications) in studies of animal interactions at the community or ecosystem level of organization. Research should include a combination of innovative experimental, theoretical, and/or modeling approaches. Teaching responsibilities include upper division and graduate level courses in ecology. Send curriculum vitae, four letters of recommendation, representative reprints, and description of research interests by 15 January 1988, to: **Dr. James N. Thompson, Jr., Chair, Department of Zoology, University of Oklahoma, Norman, OK 73019.** *An Equal Opportunity/Affirmative Action Employer.*

**VASCULAR CELL BIOLOGY.** The Department of Medical Physiology and the Microcirculation Research Institute at Texas A&M University announce the creation of two new tenure-track faculty positions at the **ASSISTANT/ASSOCIATE PROFESSOR** levels. We are interested in individuals specializing in **molecular and cellular physiology of vascular smooth muscle.** Preference will be given to investigators who have already demonstrated the ability to conduct independent research and to garner peer-reviewed grant funding at the national level. The successful candidate will join a faculty composed exclusively of cardiovascular scientists with research interests ranging from molecular biology to system physiology. The new faculty members will participate in the department's medical and graduate education programs. Please send curriculum vitae, statement of research interests, and the names of three references to: **Harris J. Granger, Ph.D., Professor and Head, Department of Medical Physiology, College of Medicine, Texas A&M University, College Station, TX 77843.**

### VETERINARY PATHOLOGISTS

International Research and Development Corporation (IRDC) has an opening for a pathologist. Board-certification plus experience in toxicologic pathology is desired. However, Board-qualified candidates will be considered. Responsibilities include histopathologic evaluation of slides and service as a pathology study monitor for ongoing studies. Ability to analyze data and write reports is essential.

Our pathology division is responsible for clinical and anatomic pathology for our extensive program of toxicological research for the pharmaceutical, agricultural, chemical, and consumer industries as well as governmental agencies.

IRDC is located a few miles from Kalamazoo, Michigan, midway between Chicago and Detroit, an area affording a broad range of urban or rural life styles with excellent cultural and recreational opportunities. We offer excellent benefit programs and a starting salary commensurate with experience. Send your résumé to:

Mr. John Ragen  
Director of Personnel  
International Research and  
Development Corporation  
500 North Main Street  
Mattawan, MI 49071  
*Equal Opportunity Employer*

# Biochemist, Immunochemist

Smith Kline & French Laboratories, a leader in pharmaceutical research, is seeking an Associate Senior Investigator to:

- plan the immunological/bioanalytical approach and if necessary develop new methodology to solve specific problems involving biopharmaceuticals and proteins of research interest.
- apply state-of-the-art immunological/bioanalytical techniques (including ELISA, Western Blotting, Electrophoresis, generation of monoclonal and/or polyclonal antibodies analytical methods of protein analysis) to analyze biopharmaceutical drug substances.

Candidates are required to have:

- A Ph.D. in Biochemistry/Immunology preferably with postdoctoral experience.
- experience with immunological and biochemical methods of protein analysis.
- excellent written and verbal communication skills.
- experience with the analysis of biopharmaceutical drug substances preferred.

Located in suburban Philadelphia, Pennsylvania, we offer excellent compensation, benefits and an attractive relocation policy as well as opportunities for personal and professional growth. Publication of research results is encouraged and supported. For confidential consideration, please forward your C.V. and names of three references to Robert F. Obst, Manager, Personnel Relations, R0114, Smith Kline & French Laboratories, P. O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

**SK&F**  
A SmithKline Beckman Company

## Associate Scientist, Molecular Biology

Applied Biosystems manufactures and markets automated instruments, a wide range of chromatography columns and components, and several hundred associated chemicals for biotechnology research and related applications.

At its Foster City location the company has an opening for a Molecular Biologist to assist in the development of automated nucleic acid sequencing systems.

This position requires a Ph.D. in Molecular Biology or a related field with two or more years of postdoctoral experience in recombinant DNA technology. Candidates should be interested in methods development and have demonstrated skills in DNA sequencing, molecular cloning, preparing and screening genomic and cDNA libraries, and restriction mapping.

The ideal candidate is innovative, self-motivated, and possesses good communication skills to work with a multi-disciplinary team. Publication in professional journals is encouraged.

Applied Biosystems offers attractive compensation, benefits and growth opportunity.

### Send resume to:

Human Resources Department  
Applied Biosystems  
850 Lincoln Centre Drive, Foster City, CA 94404  
*An Equal Opportunity Employer*

 **Applied  
Biosystems**  
Foster City Biosystems Division

# Research your future.

Syntex, an international pharmaceutical and health care corporation has immediate openings in our research headquarters located on the San Francisco Peninsula.

## Pharmacokineticist

In this position, you'll analyze data and prepare reports for bioavailability and pharmacokinetic studies in Phases II through IV human programs. Studies will include single and multiple dose kinetics, bioavailability, bioequivalence, kinetics in disease states, and drug-drug pharmacokinetic interactions.

Requirements include a PhD in Pharmacokinetics/ Biopharmaceutics, recent graduate or up to three years' experience in industrial or academic research. Familiarity with oral controlled release, dermal, nasal, rectal, and ophthalmic dosage forms is desirable. The ability to work effectively with researchers in related disciplines both with Syntex and in outside agencies is necessary.

## Inflammation Biologist

You'll be responsible for developing new clinically relevant animal models of inflammation. To qualify, you must have a

minimum of two years' postdoctoral experience with in vivo models of inflammatory diseases. Familiarity with the cellular aspects of such diseases is essential.

If you have good interpersonal skills and want to belong to a dynamic research team, send your resume to: Syntex, Professional Staffing, Dept. PS/SC, 3401 Hillview Avenue, Palo Alto, CA 94304. An equal opportunity employer.





## POSITIONS OPEN

### TOXICOLOGIST

Ricerca, Inc. is currently seeking a qualified toxicologist in its expanding Toxicology/Metabolism Department to provide scientific support to our staff and to our clients. The successful candidate will prepare study proposals, study protocols and reports for acute, subchronic and chronic safety evaluation studies. A Ph.D. in toxicology, pharmacology, or other biological science is required along with at least 3 years of toxicology experience in a contract laboratory or in industry.

Ricerca, Inc. is a research and development company which provides broad-based technical services to its clients on a contract basis. Our facilities are located in Concord Township, an attractive Cleveland, Ohio suburb. *We offer competitive salaries, an excellent Employees Benefits Program, and are an Equal Opportunity Employer.*

Interested parties should forward their résumés to: **Andrew J. Pillar**

**Ricerca, Inc.**

P.O. Box 1000  
Painesville, OH 44077

### VIRUS STRUCTURE-FUNCTION RELATIONSHIPS

Position at **RESEARCH ASSOCIATE (POST-DOCTORAL) OR INSTRUCTOR** level to study cellular and biochemical events during uncoating, replication, assembly of enveloped viruses. Address inquiries to:

**Dr. John Lenard**  
UMDNJ-Robert Wood Johnson Medical School  
675 Hoes Lane  
Piscataway, NJ 08854-5635

### ASSISTANTSHIPS

**GRADUATE STUDY IN ANALYTICAL NEUROCHEMISTRY. GRADUATE ASSISTANTSHIPS** are available for research in bioanalytical chemistry, with special emphasis in the development and application of modern methods of neurochemical analysis. Areas of research include computer modeling of neurotransmitter chemistry, in vivo voltammetric, HPLC and GC/MS methods, and applications to the chemistry and pharmacology of behavior. Opportunities exist for students to conduct interdisciplinary research in the Departments of Psychology and Chemistry. Research assistantships at the Center for Disease Control involving neurochemistry and the environment are also available. Interested students with backgrounds in chemistry, biology, or psychology should contact: **Dr. Joseph B. Justice, Department of Chemistry, Emory University, Atlanta, GA 30322. Telephone: 404-727-6585. Emory University is an Equal Opportunity Employer.**

**GRADUATE ASSISTANTSHIPS IN EVOLUTIONARY BIOLOGY** leading to M.S. and Ph.D. are available for students interested in molecular to population level approaches to evolutionary processes at the individual, population and community levels. For more information write: **Graduate Chairman, Department of Biology, University of Houston, 4800 Calhoun Road, Houston, TX 77004. The University of Houston is an Affirmative Action/Equal Opportunity Employer.**

### GRADUATE TRAINING

**GRADUATE TRAINING IN BIOCHEMISTRY AND BIOPHYSICS** at the University of Hawaii. Join our active medical school department engaged in numerous research projects of interest and importance. Unique geographical and cultural setting. Predoctoral teaching and research assistantships available fall 1988 to qualified applicants. Write to: **Chairman, Department of Biochemistry and Biophysics, University of Hawaii, Honolulu, HI 96822. An Equal Opportunity Employer.**

## Associate Director Pharmacokinetics



An equal opportunity employer

Pfizer, a leading company in pharmaceutical research and innovation, has an opportunity for an experienced pharmacokineticist to join a multi-disciplinary drug development team of pharmacologists, toxicologists and clinicians in the Department of Clinical and Scientific Affairs. The successful candidate will design, initiate and monitor clinical and pre-clinical studies for pharmacokinetic, bioavailability and drug metabolism assessments. In addition, you will evaluate and summarize pharmacokinetic/pharmacodynamic data and prepare regulatory submissions. As pharmacokineticist, you will review pre-clinical and clinical data on drugs undergoing licensing evaluation and screen research proposals for scientific interest to Pfizer. Involves approximately 5-10% international travel.

The successful candidate will possess a PhD in Pharmaceutical Sciences or a Pharm D with 5-8 years of experience in pharmacokinetic/biopharmaceutics. You should be a self motivator with excellent interpersonal, analytical, organizational and oral and written communication skills.

Explore this exceptional career prospect with Pfizer which includes competitive salary commensurate with experience, outstanding benefits and ample opportunity for professional growth. Send your resume with salary history to: **Marjorie Feld, Personnel Associate, Pfizer Inc., 235 East 42nd Street, New York, NY 10017. Only candidates with appropriate backgrounds will be considered. No telephone inquiries accepted.**

## PH.D. IMMUNOCHEMIST/ BIOCHEMIST

Abbott Laboratories. We're a \$4 billion healthcare leader worldwide. We're responsible for the first AIDS detection test. We pioneered innovative breakthroughs in Hepatitis B, Rubella and German Measles. Our success in medical diagnostics continues to create exceptionally strong research environments. And now, our Cardiovascular Diagnostics Research Group seeks an Immunochemist or Biochemist to augment and expand these continuing research efforts.

The successful candidate will have completed a minimum of 3 years post-doctoral research in areas relating to hypertension, arteriosclerosis or thrombosis/thrombolysis. Experience with the development, production and purification of monoclonal antibodies is required. Protein/enzyme purification experience is desirable. Immunoassay development experience preferred.

Abbott is recognized by Dun's Magazine as one of the nation's 5 best managed companies for 1986. We're headquartered in an attractive suburban area on the Lake Michigan shoreline 30 miles north of Chicago. In addition to this outstanding scientific environment, we provide excellent salaries and full benefits including profit sharing, stock retirement plan, and relocation assistance, as well as exceptional opportunities for professional growth. For more information, please contact: **Peggy Taylor/Corporate Placement, Dept. SM/11-20. Abbott is an Affirmative Action Employer.**

**ABBOTT**  
ABBOTT PARK IL 60064  
"Health Care Worldwide"

**POSTDOCTORAL FELLOWSHIPS IN  
THE DEPARTMENT OF ANATOMY  
AND NEUROBIOLOGY  
UNIVERSITY OF CALIFORNIA, IRVINE**

Several positions for research in individual laboratories in the Department are available for candidates who have demonstrated exceptional research promise at the predoctoral or postdoctoral level. The emphasis of research in the Department is in the areas of neuroanatomy, neurophysiology, and molecular biology. Outstanding applicants will be invited for seminar presentations. The faculty of the Department and their research interests are:

Dr. Robert Blanks:	Eye movement control.
Dr. Lyle Dearden:	Growth in cartilage.
Dr. James Fallon:	Chemical neuroanatomy.
Dr. Chris Gall:	Chemical neuroanatomy, neural plasticity in development.
Dr. Roland Giolli:	Visuomotor system.
Dr. Stewart Hendry:	Immunocytochemistry.
Dr. Paul Isackson:	Molecular neurobiology.
Dr. Edward Jones:	Sensory-motor anatomy and physiology.
Dr. Leonard Kitzes:	Auditory anatomy and physiology.
Dr. Charles Ribak:	Epilepsy, neurotransmitters and circuits.
Dr. Richard Robertson:	Organization of the forebrain.
Dr. John Swett:	Spinal cord and peripheral nervous system.

Applications or inquiries for additional information should be sent to:

**Dr. Edward G. Jones, Chairman**  
**Department of Anatomy and Neurobiology**  
**University of California**  
**Med Surge II, Room 364**  
**Irvine, CA 92717**

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**Positions Open**

ImClone Systems Incorporated, an innovative, rapidly growing biotechnology company located in New York City, is seeking highly motivated individuals for vaccine development, generation of monoclonal antibodies and immunoassay development.

**Immunologists**

Positions are available at the doctoral and research associate levels for individuals with demonstrated skills in the generation of B and T cell hybridomas. Relevant industrial experience would be an advantage.

Several positions are available at the B.S. level for persons with purification, PAGE, and immunodiagnostic assay formatting experience.

ImClone offers excellent salary and benefits, and a challenging, multidisciplinary environment for scientists who can assume both individual and team responsibilities.

Send CV to: **John Landes, ImClone Systems Incorporated, 180 Varick St., New York, New York 10014.**



**ImClone Systems Incorporated**

# **METABOLIC DISEASES RESEARCH SCIENTISTS**

The Upjohn Company, recognized as a world leader in pharmaceutical research, is expanding its Diabetes Research Group and is seeking three scientists to initiate and carry out creative research in the following areas:

## **Cell Physiologist/Biochemist/Molecular Pharmacologist (Position #22044-F):**

Conduct original research directed toward understanding the mechanisms involved in translation of insulin receptor activation into biochemical and physiological responses, especially control of carbohydrate metabolism. Study mechanisms and biological processes involved in insulin resistance that might be manipulated pharmacologically to treat non-insulin-dependent diabetes mellitus. The applicants should have a Ph.D. or equivalent doctoral degree in a medical science. Post-doctoral experience studying receptors; post-receptor coupling of biochemical events with physiological response; mechanisms involved in hormone resistance and desensitization, and an interest in applying this knowledge to discovery of new therapeutic approaches for diabetes is desired.

## **Integrative Pharmacologist/Physiologist/Endocrinologist (Position #22045-F):**

Conduct original research directed toward understanding the mechanisms involved in the pathology and treatment of non-insulin-dependent diabetes mellitus focusing on functional interactions at the level of integrated physiological responses *in vivo*. Interface with biochemically and physiologically oriented scientists to investigate how specific chemical modulators of cell functions can be used to elucidate the mechanism(s) involved in development of diabetes and treatment of the disease. The applicants should have a Ph.D or equivalent doctoral degree in a medical science, preferably pharmacology, with at least 2 years of post-doctoral experience. A broad base of expertise in using animal models for studying metabolic diseases, preferably diabetes and its accompanying complications, is desirable. Excellent facilities and resources are available for maintaining special animal colonies.

## **Biochemist/Endocrinologist/Pharmacologist (Position #22046-F):**

Conduct original research directed toward understanding physiological control of the pathways involved in carbohydrate and lipid metabolism. Carry out integrative studies to understand how hormones, neurotransmitters, local humoral agents and drugs influence insulin secretion, action, or resistance. Interact with scientists of different disciplines interested in developing new therapeutic agents, especially scientists interested in *in vivo* models of diabetes and atherosclerosis. The applicants should have a Ph.D or equivalent doctoral degree in a medical science and expertise in the fields of biochemistry, endocrinology or pharmacology. Post-doctoral experience in analysis of mechanisms involved in diabetes is desirable.

For all three of the above positions, applicants must have demonstrated effective collaboration with other scientists, the ability to integrate data from different disciplines, and strong oral and written communication skills. Publication of research data is encouraged, and it is expected that the successful candidates will attain peer recognition for their scientific accomplishments.

The Diabetes Research Group works within the Metabolic Diseases Unit, which also includes other laboratories focused on atherosclerosis, lipoprotein metabolism, and vascular cell biology. Interaction between laboratories is encouraged.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a mix of excellent cultural, educational and recreational pursuits, including numerous lakes and a four-season climate. Upjohn offers a very competitive salary, commensurate with experience and an outstanding benefits program.

For confidential consideration, please call toll free 1/800/253-8600, ext. 3-6767, (inside Michigan call collect 616/323-6767) to request an employment application be sent to you. Please refer to the appropriate position number above when calling.

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## COURSE

### MOLECULAR ENDOCRINOLOGY AND TECHNIQUES FOR HORMONE ACTION 21 to 26 February 1988

This course will consist of lectures in methodology with comprehensive syllabus covering receptors, gene transcription, mRNA and protein synthesis, recombinant DNA, protein hormones, and cyclic nucleotides.

Co-directors: W. T. Schrader and B. W. O'Malley  
Fee: \$365 (\$245: fellows and students)  
For further information contact:

Bonnie Cuthbert  
Department of Cell Biology  
Houston, Texas 77030  
Telephone: 713-799-6200  
Deadline—29 January 1988

## GRANTS

### SUPERCOMPUTING RESOURCES AVAILABLE TO BIOMEDICAL RESEARCHERS AT THE PITTSBURGH SUPERCOMPUTING CENTER

Grants of supercomputing time on the Cray X-MP/48 at the Pittsburgh Supercomputing Center (PSC) are available to biomedical researchers through a program funded by the Biomedical Research Technology program of the National Institutes of Health's Division of Research Resources.

Starter grants of three service units (roughly 3 hours of single-processor XMP time) are available for feasibility studies or code conversion and optimization. A limited number of larger grants of 20 service units are available to researchers with prior supercomputing experience.

The proposed research must be biomedical and non-proprietary; grantees must be faculty members or postdoctoral fellows. Graduate students may be designated as users on any grant.

Training: A 4 and 1/2 day workshop on supercomputing techniques for biomedical researchers will be held 22 through 26 February, 1988. The workshop is aimed at experienced FORTRAN programmers, but prior supercomputing experience is not necessary. The topics include an introduction to VMS (half-day, optional), the Cray-VAX interface, Cray job control, optimization techniques, an overview of available biomedical software, and a description of access paths to the PSC.

Expenses for this workshop are covered under a grant from the NIH. A limited number of openings for industrially-based biomedical researchers may be available for a fee of \$1000. The deadline for workshop applications is 15 January 1988.

For application forms and additional information, call or write: Wendy Janocha, Biomedical Coordinator, Pittsburgh Supercomputing Center, 4400 Fifth Avenue, Pittsburgh, PA 15213; telephone: 412-268-5005.

## PROGRAM

### CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain a doctor of optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: Ph.D.-O.D. Program Director, Admissions Office, The New England College of Optometry, Room 14, 424 Beacon Street, Boston, MA 02115.

### SHANNON POINT MARINE CENTER (SPMC) WESTERN WASHINGTON UNIVERSITY

**SABBATICAL SUPPORT PROGRAM.** SPMC invites applications for visiting faculty on sabbatical leave from home institutions. Funds are available 1 July 1988, to provide partial salary support to visiting faculty (up to \$1250 per month). Support for individuals not requiring salary may include boat time and laboratory space. Applications accepted until position filled. For more information and application procedures, write: Dr. Stephen D. Sulkin, Professor and Director, Shannon Point Marine Center, 1900 Shannon Point Road, Anacortes, WA 98221.

## CONFERENCE

**"MOLECULAR AND GENETIC BASIS OF GROWTH AND DEVELOPMENT."** 22 to 23 February 1988, National Institutes of Health, Bethesda, Maryland, sponsored by the National Institute of Dental Research.

Topics to be covered by leading scientists include molecular mediators of growth and differentiation, nuclear regulation, molecular determinants of morphogenesis, and molecular approaches used to study pattern and form. The concepts and techniques to be discussed offer promise in addressing research on human birth defects. Speakers: Welcome Bender, Gerald Edelman, Norton Gilula, Peter Hauschka, Rudolph Jaenisch, Hynda Kleinman, Gail Martin, Darwin Prockop, Anita Roberts, Erkki Ruoslahti, Joseph Schlessinger, Harold Slavkin, Inder Verma, Carl Wu, Yoshihiko Yamada, and Keith Yamamoto.

Attendance is free; advanced registration required. For registration information contact: Registrar, Prospect Associates, Suite 500, 1801 Rockville Pike, Rockville, MD 20852, or call 301-468-MEET Monday to Friday, from 8:30 a.m. to 5:00 p.m., EST.

## FELLOWSHIPS

### POSTDOCTORAL FELLOWSHIPS IN APPLIED ECOLOGY AT MIAMI UNIVERSITY

Four or more fully funded postdoctoral positions in the Zoology Department are available. May begin in August 1988 or later. Those interested in conducting research in one or more of the following areas are invited to apply: Aquatic ecology, aquatic toxicology, behavioral/CNS-toxicology, and agroecosystem ecology. Appointments carry \$20,000 annual salary, with full range of benefits. Listing of ongoing projects and faculty involved is available upon request. Submit résumé, three letters of recommendation, and transcripts of all academic work to: R. G. Sherman, Chair of Zoology, Miami University, Oxford, OH 45056.

**POSTDOCTORAL FELLOWSHIP IN BEHAVIORAL MEDICINE:** The Behavioral Medicine Research Program at the University of Miami has a position available immediately to study the psychophysiology of cardiovascular reactivity. Individual must have M.D. or Ph.D. degree. U.S. citizenship or residency required. Funding through NIH training grant in Cardiovascular Behavioral Medicine. Send curriculum vitae with names of three references to: Dr. Neil Schneiderman, University of Miami, Behavioral Medicine Research Center, 1500 N.W. 12th Avenue 14th Floor West, Miami, FL 33136. An Equal Opportunity/Affirmative Action Employer.

### PREDOCTORAL FELLOWSHIPS IN DOMESTIC ANIMAL BIOTECHNOLOGY

Outstanding applicants are encouraged to apply for an integrated Ph.D. program in molecular aspects of reproductive biology and methods for diagnosis and prevention of infectious diseases, using techniques of immunology, molecular biology, molecular genetics, and genetic engineering. Multiyear, \$15,000 annual fellowships. Send a statement of goals, interests, and relevant experience, and have complete college transcripts, GRE scores, and three letters of reference sent to: Dr. G. D. Niswender, Associate Dean for Research, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, CO 80523. Equal Employment Opportunity/Title IX Employer.



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AVAILABLE**

Basic Neuroscience	\$5,000 to \$25,000
Clinical Studies	\$5,000 to \$25,000
Postdoctoral Fellowships	\$15,000 to \$20,000

For application write: Tourette Syndrome Association, 42-40 Bell Boulevard, Bayside, NY 11361. Letters of intent to apply due by 15 January 1988.

## FELLOWSHIPS

### GRADUATE FELLOWSHIPS CENTER FOR THE STUDY OF EVOLUTION AND THE ORIGIN OF LIFE (CSEOL) UNIVERSITY OF CALIFORNIA LOS ANGELES (UCLA)

CSEOL invites applications for three 1st-year predoctoral fellowships for 1988 to 1989. Stipends are each \$9,000 for 9 months, with no teaching or other duties. Fellows are included in a select group of former Fellows and other graduate students invited to interact with Center faculty in a weekly dinner/seminar/discussion series. Applicants should be planning to carry out thesis research under the supervision of a CSEOL faculty member and in a subject area relating to evolution, broadly construed—of the solar system, of Earth, of the environment, of life, of humans. Areas of particular interest for 1988 to 1989 include (i) the origin of life; (ii) biochemical phylogeny; (iii) Precambrian biotic-environmental evolution; and (iv) the interface between molecular biology and the known fossil record. Faculty are members of the UCLA Departments of Anthropology, Astronomy, Atmospheric Sciences, Biology, Chemistry and Biochemistry, Computer Science, Earth and Space Sciences, Geography, and Microbiology; the School of Medicine (Anatomy; Microbiology and Immunology; Physiology; Biobehavioral Sciences); and the School of Public Health. Fellowship applicants must apply by 15 February 1988, both to an appropriate academic department and to CSEOL. For application forms and a list of CSEOL members, contact:

CSEOL Fellows Committee  
Geology Building, Room 5687  
University of California, Los Angeles  
Los Angeles, CA 90024  
Telephone: 213-825-1170

### POSTDOCTORAL FELLOWSHIP RESEARCH ASSOCIATE

Studies of human cell and humoral mediated immune responses to human CMV with particular emphasis on the effects of human monoclonal antibodies. Ph.D. or equivalent required. Send curriculum vitae and three letters of reference to: Steven K. H. Foung, M.D., Department of Pathology—L235, Stanford University School of Medicine, Stanford, CA 94305. Stanford is an Equal Opportunity/Affirmative Action Employer.

**TWO POSTDOCTORAL FELLOWSHIPS** \$20,000 to \$35,000 per year available immediately. To study the structure and function of the retinoblastoma gene. Work includes the study of the mechanism of inactivation of the retinoblastoma gene; the suppression of tumorigenicity of tumor cells transfected with the normal retinoblastoma gene and related alteration in gene expressions. Experience in cellular and/or molecular biology is essential. Send résumé and names of three references to: Dr. Yuen Kai Fung, Hematology/Oncology, P.O. Box 54700, Los Angeles, CA 90054-0700. CHLA/USC is an Affirmative Action/Equal Opportunity Employer.

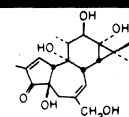
## MARKETPLACE

**DNA MAPPING:** The NIDDK and the DOE/Los Alamos National Laboratory have established a resource for mapping of DNA probes to dot-blot filters of separated human chromosomes. Please advise us of your interest in this service by providing general information on number and nature of probes and their expected availability, your address and affiliation to: Robert Katz, Ph.D., Director, Metabolic Diseases Research, WW 607, NIH, Bethesda, MD 20892. This inquiry is independent of previous announcements.

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We are the worldwide research and development organization of a major pharmaceutical company, committed to excellence in the discovery and development of modern approaches to medical therapy. Our largest research and development center is located near Albany, New York with other facilities in the United Kingdom and France.

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facilities, increased scientific staff and focused our research efforts. Our goal is to generate new ethical pharmaceuticals from the creative efforts in laboratory research and clinical development.

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- Cardiovascular and Immunopharmacology
- Organic and Analytical Chemistry
- Pharmaceutical Chemistry

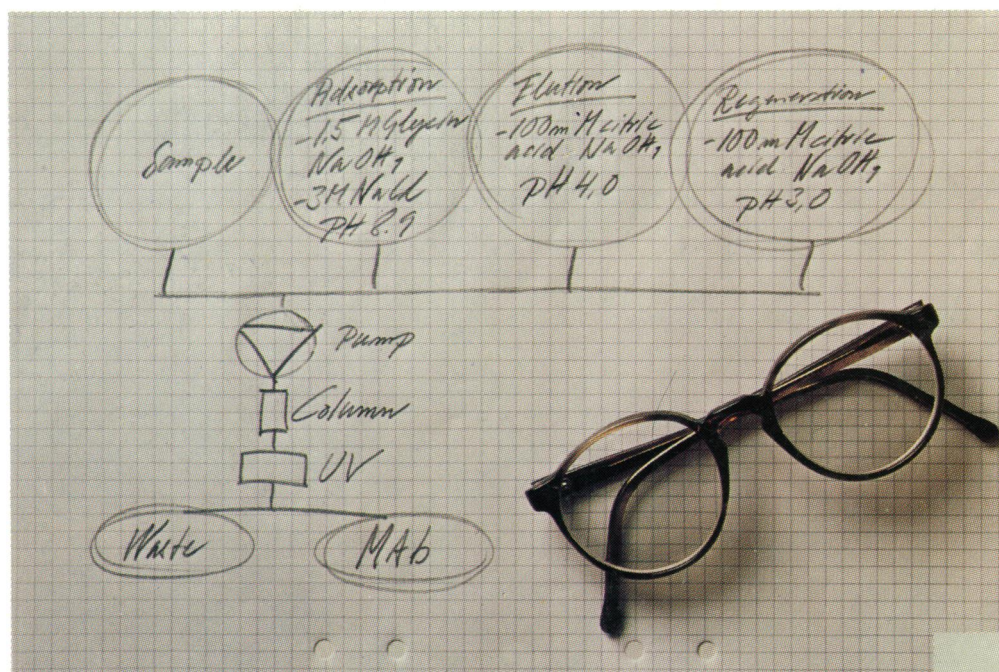
Resumes may be sent to: Mr. William F. Sheldon, Employment Manager, Sterling-Winthrop Research Institute, Sterling Research Group, A Division of Sterling Drug Inc., Columbia Turnpike, Rensselaer, New York 12144.

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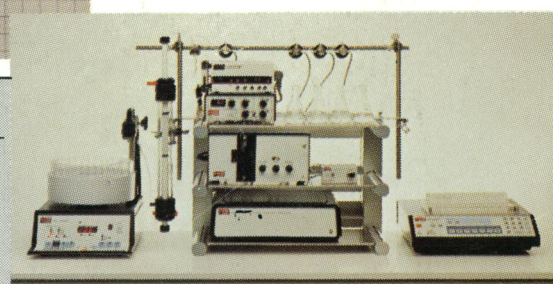
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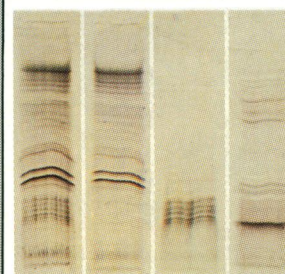
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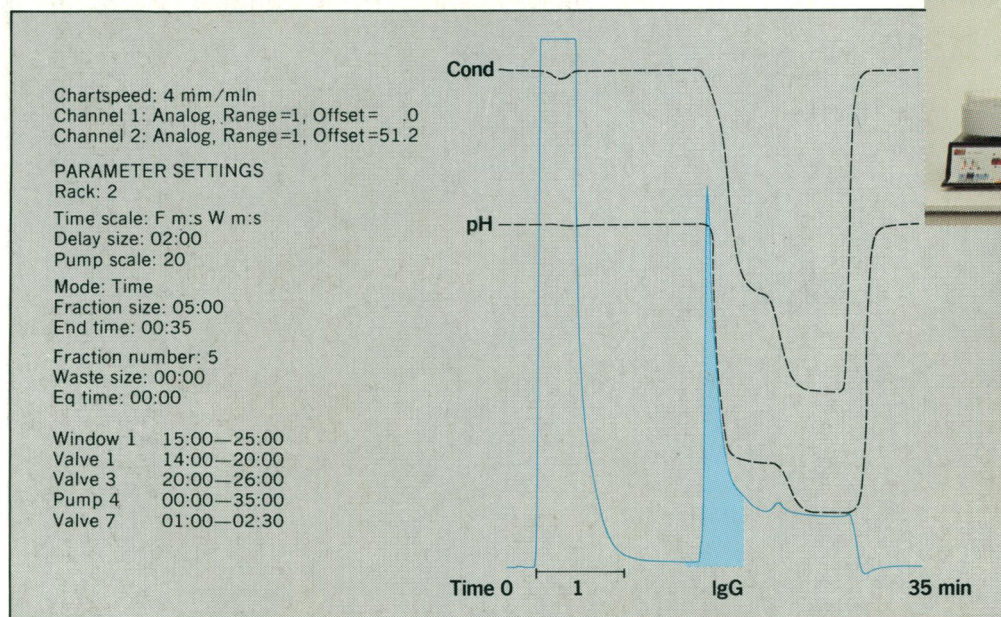
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