

sense of urgency pervades the worldwide community of scientific naturalists. This book is a manifestation of their concern.

The volume, which is attractively produced with a beautiful cover and good binding, records the presentations at the first National Forum on BioDiversity, sponsored by the National Academy of Sciences and the Smithsonian Institution. Many of the 61 contributors are well known for their work in conservation biology, and especially tropical biology—E. O. Wilson, Peter Raven, Daniel Janzen, David Ehrenfeld, Norman Myers, Paul Ehrlich, Russell Mittermeier, Thomas Lovejoy, Michael Soule, and more. The authors range from systematists and ecologists to economists, from pragmatic agriculturalists to theologians, and from conservation technologists to philosophers.

For the most part these are not original presentations. Many of the authors have written extensively on this topic, and the papers here are mostly reviews, restatements, or updated evaluations. But I can think of no better way to become familiar with the full spectrum of issues in the preservation of biological diversity than to read this book. It is an excellent point of departure, for it is loaded with information and all the chapters have helpful, up-to-date lists of references.

In addition to a thoughtful, stimulating introduction by Wilson and a brief epilogue in which David Challinor assesses the immediate impact of the forum, the book has 12 parts containing four to six chapters each, including brief introductions. These parts range in content from assessments of the present state and value of biological diversity and threats to it, outlines of strategies for preservation and restoration, and considerations of global, national, and local policy issues to statements of appreciation of the diversity of life by a poet, a writer, a theologian, and even James Lovelock of "Gaia" fame. There are a few turgid chapters, but since all are short these do not interfere with the general flow of the book.

I found only one definition of biological diversity, a quote from Bruce Wilcox: "the variety of life forms, the ecological roles they perform, and the genetic diversity they contain." This definition serves all of the chapters in this book.

There is great emphasis on the worldwide tropics, for if there is a battleground it is there. Not only is biological diversity greater in the tropics than in other latitudes, tropical habitats are undergoing profound changes, including threats of extinction, that many biologists fear may be irreversible. In these chapters you will find many true horror stories of the rate of conversion of tropical forests, the rate of loss of species (there

seems to be some agreement that it must now be about one species per day), and the social, economic, and political barriers that prevent anyone from doing much about the problem as a whole. But there are some effective efforts being made by individuals, groups, organizations, and even nations, and these, too, are documented.

There exist many misconceptions concerning biological diversity. For example, though there is justifiable pride among those who have worked to establish nature preserves and national parks, reserves will not solve the problems of biodiversity, as many authors recognize. Wilson points out that even if endangered species can be saved from extinction, such species almost certainly will have lost most of their internal diversity and have become almost genetically uniform in the process. The establishment of a reserve is often a signal to destroy everything surrounding it, until the edges of the reserve itself undergo cultural erosion and the reserve declines.

The popular media have featured endangered megafauna—whales, pandas, condors, rhinos, and the like. But there is little understanding among the public of the extent to which insects, plants, and other groups will be affected by the mass extinction that is now beginning. We have only a rough idea of how many species of insects exist, and vast numbers remain undescribed. Many will disappear without ever having been noticed by humans. Tropical forests are so rich that even some large trees, dominating local forests, have remained undescribed until recently. The coming extinction will affect plants far more than have the mass extinctions of the past.

Many chapters point out the array of values biological diversity holds for human enterprises, but Ehrenfeld has a different view: biological diversity is of intrinsic value, and the public must come to understand the inherent wrongness of its destruction. This is a lofty and inspiring view; and for those who want pragmatic examples of the value of biological diversity, the other chapters are richly supplied with them.

Because the tropics are being affected so severely, we tend to think of the loss of biological diversity as a problem of the Third World. But many examples from the so-called developed world can be found—acid rain is only one of the more recent factors. Peter Vitousek points out that nearly half of Hawaii's largest native-dominated lowland rain forest was cleared during 1984 and 1985 in a subsidized endeavor to generate electricity from wood chips.

Perhaps there are some bright spots in an otherwise gloomy picture. There is still time to accomplish much if the developed coun-

tries of the world recognize their responsibility (as Michael Hanemann observes, "If we want developing countries to protect their biological resources we should be willing to pay them to do so"). Restoration ecology is becoming increasingly sophisticated and successful. Marine organisms are being far less affected by current changes than are terrestrial plants and animals. If a substitute for simple firewood could be found and distributed, the impact on tropical forests would be profound.

But a crisis is at hand. The best-informed conservationists and naturalists in the world are deeply alarmed and are sounding a warning to us all. To Wilson the magnitude and control of biological diversity is one of the key problems of science as a whole, and we are about to lose our opportunity to study it. There is much agreement that the growth of the human population is the fundamental cause of the loss of biological diversity. Ehrlich points out that Earth's habitats are being nicked-and-dimed to death, and we have difficulty perceiving and reacting to changes that occur on a scale of decades. Politicians get away with platitudes because there is no general awareness of the magnitude of the problem.

Biodiversity may become the rallying call for the next decade. It is a concept that is coming to be understood in the World Bank, the United Nations, multinational organizations, Congress, and even the private financial community. We cannot expect even the largest and most effective private groups, such as the World Wildlife Fund, to carry the burden; they are just too small. International action will be needed if there is to be any hope of putting into effect more than a few of the wide array of excellent ideas contained in this volume.

Anyone concerned with biodiversity should own this book. It is not tightly organized, there are a few loose guns on deck, and there is often more inspiration than plan for action. Still, it is the one best source for information on the present state of biological diversity and for ideas concerning its maintenance and restoration.

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Books Received

Acoustics Source Book. Sybil P. Parker, Ed. McGraw-Hill, New York, 1988. viii, 333 pp., illus. \$35. McGraw-Hill Science Reference Series. Series includes source books on communications, computer science, meteorology, and nuclear and particle physics, all based on the McGraw-Hill *Encyclopedia of Science and Technology* (New York, 1987).

Biology and the Mechanics of the Wave-Swept Environment. Mark W. Denny. Princeton University Press, Princeton, NJ, 1988. xiv, 329 pp., illus. \$60; paper, \$25.

Biology of Lung Cancer. Diagnosis and Treatment. Steven T. Rosen *et al.*, Eds. Dekker, New York, 1988. xvi, 362 pp., illus. \$99.50. Lung Biology in Health and Disease, vol. 37.

Biotechnology and the Human Genome. Innovations and Impact. Avril D. Woodhead and Benjamin J. Barnhart, Eds. Plenum, New York, 1988. viii, 175 pp. \$49.50. Basic Life Sciences, vol. 46. From a workshop, Upton, NY, Sept. 1987.

Bones of Contention. Controversies in the Search for Human Origins. Roger Lewin. Touchstone (Simon and Schuster), New York, 1988. 348 pp. + plates. Paper, \$9.95. Reprint, 1987 ed.

Butterflies of the World. Rod Preston-Mafham and Ken Preston-Mafham. Facts on File, New York, 1988. 192 pp., illus. \$22.95.

Cardiac Contraction and the Pressure-Volume Relationship. Kiichi Sagawa *et al.*, Eds. Oxford University Press, New York, 1988. xvi, 480 pp., illus. \$70.

Causation in Decision, Belief Change, and Statistics. William L. Harper and Brian Skyrms, Eds. Kluwer, Norwell, MA, 1988. xx, 252 pp., illus. \$69. University of Western Ontario Series in Philosophy of Science, vol. 42. From a conference, Irvine, CA, July 1985.

Cell and Tissue Biology. A Textbook of Histology. Leon Weiss, Ed. 6th ed. Urban and Schwarzenberg, Baltimore, 1988. xiv, 1158 pp., illus., + plates. \$59.50.

Cellular Oncogene Activation. George Klein, Ed. Dekker, New York, 1988. xvi, 396 pp., illus. \$110. Immunology Series, vol. 41.

A Century of Natural History. J. C. Daniel, Ed. Bombay Natural History Society and Oxford University Press, New York, 1988. xxii, 759 pp., illus., + plates. \$35. Reprint, 1983 ed.

Chemical Induction of Cancer. Vol. 3C, Natural, Metal, Fiber, and Macromolecular Carcinogens. Yin-tak Woo *et al.* Academic Press, San Diego, CA, 1988. xxviii, 869 pp. \$125.

Chemical Reactivity in Liquids. Fundamental Aspects. Michael Moreau and Pierre Turq, Eds. Plenum, New York, 1988. x, 631 pp., illus. \$115. From a meeting, Paris, France, Sept. 1987.

Divostin and the Neolithic of Central Serbia. Alan McPherron and Dragoslav Srejović, Eds. University of Pittsburgh Department of Anthropology, Pittsburgh, PA, 1988. xiv, 492 pp., illus., + loose plans. Paper, \$57. Ethnology Monographs, no. 10.

Dopaminergic Mechanisms in Vision. Ivan Bodis-Wollmer and Marco Piccolino, Eds. Liss, New York, 1988. xiv, 276 pp., illus. \$55. Neurology and Neurobiology, vol. 43. Based on a conference, Budapest, Hungary, Aug. 1987.

Ecological and Behavioral Methods for the Study of Bats. Thomas H. Kunz, Ed. Smithsonian Institution Press, Washington, DC, 1988. xxii, 533 pp., illus. \$50.

Effective Writing for Engineers, Managers, Scientists. H. J. Tichy with Sylvia Fourdrinier. 2nd ed. Wiley-Interscience, New York, 1988. xxii, 580 pp., illus. \$29.95.

Electro-Enzymology, Coenzyme Regeneration. K. Nakamura, M. Aizawa, and O. Miyawaki. Springer-Verlag, New York, 1988. viii, 166 pp., illus. \$105. Biotechnology Monographs, vol. 4.

Electron-Molecule Scattering and Photoionization. P. G. Burke and J. B. West, Eds. Plenum, New York, 1988. x, 272 pp., illus. \$65. Physics of Atoms and Molecules. From a symposium, Warrington, U.K., July 1987.

Encyclopedia of Statistical Sciences. Vol. 9. Samuel Kotz and Norman L. Johnson, Eds. Wiley-Interscience, New York, 1988. xiv, 762 pp., illus. \$125.

Enemies of Freedom. Understanding Right-Wing Authoritarianism. Bob Altmeyer. Jossey-Bass, San Francisco, 1988. xxxii, 378 pp. \$22.95. Jossey-Bass Social and Behavioral Science Series and Jossey-Bass Public Administration Series.

Ensuring Minority Success in Corporate Management. Donna E. Thompson and Nancy DiTomaso, Eds. Plenum, New York, 1988. xxvi, 387 pp. \$42.50. Plenum Studies in Work and Industry. From a symposium, Newark, NJ, Sept. 1984.

The Entomology of Indigenous and Naturalized Systems in Agriculture. Marvin K. Harris and Chalcie E. Rogers, Eds. Westview, Boulder, CO, 1988. xii, 238 pp., illus. Paper, \$35. Westview Studies in Insect Biology. Based on symposia, 1985-1986.

Essentials of Medicinal Chemistry. Andrejus Korolkovas. 2nd ed. Wiley-Interscience, New York, 1988. xii, 1204 pp., illus. \$125.

Feminism and Freedom. Michael Levin. Transaction, New Brunswick, NJ, 1987. xii, 336 pp. \$39.95; paper, \$19.95.

From Myth to Creation. Art from Amazonian Ecuador. Dorothea S. Whitten and Norman E. Whitten, Jr. University of Illinois Press, Champaign, 1988. viii, 64 pp., illus. Paper, \$19.95.

Frozen in Time. Unlocking the Secrets of the Franklin Expedition. Owen Beattie and John Geiger. Dutton, New York, 1988. xii, 179 pp., illus., + plates. \$18.95.

The Fundamental Interaction. Geometrical Trends. Joachim Debrus and Allen C. Hirshfeld, Eds. Plenum, New York, 1988. viii, 249 pp., illus. \$59.50. From a meeting, Bad Honnef, F.R.G., Feb. 1987.

GaAs Integrated Circuits. Joseph Mun, Ed. McGraw-Hill, New York, 1988. xiv, 547 pp., illus. \$49.95.

Gaining Ground. Japan's Strides in Science and Technology. George Gamota and Wendy Frieman. Ballinger (Harper and Row), Cambridge, MA, 1988. xvi, 180 pp. \$32.

Gastrointestinal Hormones. Viktor Mutt, Ed. Academic Press, San Diego, CA, 1988. x, 545 pp., illus. \$110. Advances in Metabolic Disorders, vol. 11.

Generalized Functions, Convergence Structures, and Their Applications. Bogoljub Stanković *et al.*, Eds. Plenum, New York, 1988. xii, 452 pp. \$95. From a conference, Dubrovnik, Yugoslavia, June 1987.

Genetics and Biotechnology of Bacilli. Vol. 2. A. T. Ganesan and James A. Hoch, Eds. Academic Press, San Diego, CA, 1988. xiv, 429 pp., illus. \$69. From a conference, San Diego, CA, June 1987.

Geologic Causes of Natural Radionuclide Anomalies. Mark A. Marikos and Robert H. Hansman, Eds. Missouri Department of Natural Resources, Rolla, MO, 1988. vi, 180 pp., illus. Paper, \$5. From a conference, St. Louis, MO, April 1987.

Gondwana and Tethys. M. G. Audley-Charles and A. Hallam, Eds. Published for the Geological Society by Oxford University Press, New York, 1988. viii, 317 pp., illus. \$120. Geological Society Special Publications, vol. 37. From a meeting, May 1986.

A Handbook of Biological Illustration. Frances W. Zweifel. 2nd ed. University of Chicago Press, Chicago, 1988. xvi, 137 pp., illus. \$27; paper, \$9.95. Chicago Guides to Writing, Editing, and Publishing.

Handbook on Anaerobic Fermentations. Larry E. Erickson and Daniel Yee-Chak Fung, Eds. Dekker, New York, 1988. xxiv, 850 pp., illus. \$149.75. Bioprocess Technology, vol. 3.

Herpes and Papilloma Viruses. Their Role in the Carcinogenesis of the Lower Genital Tract. Vol. 2. G. De Palo, F. Rilke, and H. zur Hausen, Eds. Raven, New York, 1988. xvi, 268 pp., illus. \$73.50. Sero Symposium Publications from Raven Press, vol. 46. From a symposium, Milan, Italy, 1987.

Instruments and Techniques for Thunderstorm Observation and Analysis. Edwin Kessler, Ed. 2nd ed. University of Oklahoma Press, Norman, 1988. xvi, 268 pp., illus. \$65. Thunderstorms, vol. 3.

An Introduction to Hilbert Space. Nicholas Young. Cambridge University Press, New York, 1988. x, 239 pp., illus. \$59.50; paper, \$21.95.

An Introduction to Solid State Diffusion. Richard J. Borg and G. J. Dienes. Academic Press, San Diego, CA, 1988. xvi, 360 pp., illus. \$49.50.

Intuitive Analog Electronics. From Electron to Op Amp. Thomas M. Frederiksen. McGraw-Hill, New York, 1988. xii, 257 pp., illus. \$34.95; paper, \$21.95. McGraw-Hill Series in Intuitive IC Electronics.

Machiavellian Intelligence. Social Expertise and the Evolution of Intellect in Monkeys, Apes, and Humans. Richard W. Byrne and Andrew Whitem, Eds. Clarendon (Oxford University Press), New York, 1988. xvi, 413 pp., illus. \$75.

Managing Innovation. Cases from the Services Industries. Bruce R. Guile and James Brian Quinn, Eds. National Academy Press, Washington, DC, 1988. viii, 211 pp., illus. Paper, \$22.50. Series on Technology and Social Priorities. Based on a symposium, Washington, DC, Jan. 1988.

Manual of Drug and Alcohol Abuse. Guidelines for Teaching in Medical and Health Institutions. Awmi Arif and Joseph Westermeyer, Eds. Plenum Medical, New York, 1988. xxii, 327 pp. \$42.50.

Mark Kac Seminar on Probability and Physics. Syllabus 1985-1987. F. den Hollander and H. Maassen, Eds. Centrum voor Wiskunde en Informatica, Amsterdam, 1988. viii, 162 pp. Paper, Dfl. 25.30. CWI Syllabus 17.

Memoirs of an Unregulated Economist. George J. Stigler. Basic Books, New York, 1988. xii, 228 pp. + plates. \$17.95.

Nutrition and Living Today and Tomorrow. Wilson G. Pond. Interstate, Danville, IL, 1989. xii, 203 pp., illus. Paper, \$12.95.

O Stars and Wolf-Rayet Stars. Peter S. Conti and Anne B. Underhill. National Aeronautics and Space Administration, Washington, DC, 1988 (available from the Superintendent of Documents, Washington, DC). lxxxiv, 428 pp., illus. Paper, \$24. Monograph Series on Nonthermal Phenomena in Stellar Atmospheres.

The Pasteurization of France. Bruno Latour. Harvard University Press, Cambridge, MA, 1988. x, 273 pp. \$30. Translated from the French edition (Paris, 1984) by Alan Sheridan and John Law.

Perceptions of Technological Risks and Benefits. Leroy C. Gould *et al.* Russell Sage Foundation, New York, 1988. xx, 277 pp., illus. \$29.95.

Performance Theory. Richard Schechner. 2nd ed. Routledge (Routledge, Chapman and Hall), New York, 1988. xvi, 304 pp., illus. \$49.95; paper, \$14.95.

Pharmaceutical Reformulation. The Physicochemical Properties of Drug Substances. James I. Wells. Horwood, Chichester, U.K., and Halsted (Wiley), New York, 1988. 227 pp., illus. \$59.95. Ellis Horwood Series in Pharmaceutical Technology.

Philosophy of Social Science. Alexander Rosenberg. Westview, Boulder, CO, 1988. xiv, 218 pp. \$35; paper, \$18.95.

The Physics and Technology of Amorphous SiO₂. Roderick A. B. Devine, Ed. Plenum, New York, 1988. xii, 579 pp., illus. \$97.50. From a symposium, Les Arcs, France, June-July 1987.

Quantum Mechanics of Many Degrees of Freedom. Daniel S. Koltun and Judah M. Eisenberg. Wiley-Interscience, New York, 1988. xvi, 313 pp., illus. \$44.95.

Quantum Probability. Stanley P. Gudder. Academic Press, San Diego, CA, 1988. xii, 316 pp. \$49.50. Probability and Mathematical Statistics.

Quaternary Geology for Scientists and Engineers. John A. Catt. Horwood, Chichester, U.K., and Halsted (Wiley), New York, 1988. 340 pp., illus. \$69.95. Ellis Horwood Series in Applied Geology.

Quick Scientific Terminology. Kenneth Jon Rose. Wiley, New York, 1988. xiv, 267 pp. Paper, \$12.95. Wiley Self-Teaching Guides.

Race into Space. The Soviet Space Programme. Brian Harvey. Horwood, Chichester, U.K., and Halsted (Wiley), New York, 1988. 381 pp., illus. \$39.95. Ellis Horwood Library of Space Science and Space Technology.

Strong Mothers, Weak Wives. The Search for Gender Equality. Miriam M. Johnson. University of California Press, Berkeley, 1988. xii, 347 pp. \$25.

Synthetic Aspects of Aminodeoxy Sugars of Antibiotics. I. F. Pelyvás, C. Monneret, and P. Herczegh. Springer-Verlag, New York, 1988. xvi, 244 pp., illus. \$95.80.

Targeting of Drugs. Anatomical and Physiological Considerations. Gregory Gregoriadis and George Poste, Eds. Plenum, New York, 1988. viii, 222 pp., illus. \$59.50. NATO Advanced Science Institutes Series A, vol. 155. From an institute, Cape Sounion, Greece, June-July 1987.

Tectonic Evolution of the Himalayas and Tibet. R. M. Shackleton, J. F. Dewey, and B. F. Windley, Eds. The Royal Society, London, 1988. vi, 325 pp., illus., + plates. £69. From a meeting, London, U.K., Nov. 1987.

Theoretical Morphology. Approaches in Modern Linguistics. Michael Hammond and Michael Noonan, Eds. Academic Press, San Diego, CA, 1988. xvi, 394 pp. \$65. Based on a symposium, Milwaukee, WI.

A Theory of Determinism. The Mind, Neuroscience, and Life-Hopes. Ted Honderich. Clarendon (Oxford University Press), New York, 1988. xii, 644 pp., illus. \$98.

The Theory of Polymer Dynamics. M. Doi and S. F. Edwards. Clarendon (Oxford University Press), New York, 1988. xiv, 391 pp., illus. Paper, \$35. Reprint, 1986 ed.

Van Nostrand's Scientific Encyclopedia. Douglas M. Considine and Glenn D. Considine, Eds. 7th ed. Van Nostrand Reinhold, New York, 1988. 2 vols. xxxii, 3180 pp., illus. \$175.

Water-Soluble Polymers for Petroleum Recovery. G. A. Stahl and D. N. Schulz, Eds. Plenum, New York, 1988. x, 355 pp., illus. \$69.50. Based on a symposium, Anaheim, CA, Aug. 1986.

Wave Propagation in Solids and Fluids. Julian L. Davis. Springer-Verlag, New York, 1988. x, 386 pp., illus. \$75.

The Woman Question in Classical Sociological Theory. Terry R. Kandal. University Presses of Florida, Gainesville, 1988. xx, 341 pp. Paper, \$19.50.

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Literature

The *Thin Layer Chromatography Cumulative Bibliography* lists more than 2000 articles from 1982 to 1987 on thin-layer chromatography. \$55. CAMAG Scientific. Circle 459.

Products and Applications for Thin-Layer Chromatography and Sample Preparation is a catalog of analytical and preparative thin-layer chromatography plates and accessories. Analtech. Circle 461.

Introducing the PSS-80 is a brochure that describes a peptide synthesizer that uses either fluorenylmethyloxycarbonyl or *t*-butoxycarbonyl chemistries. Applied Protein Technologies. Circle 462.

The Effects of New Developments in Computers and Operating Systems on Laboratory Instrument Control is a guide to selecting computers to control high-performance liquid chromatography systems. Gilson Medical Electronics. Circle 465.

The Critical Science Monitor is a newsletter devoted to advances in supercritical fluid and gas chromatography. Lee Scientific. Circle 466.

HP 89511A Quantitation Software is a brochure that describes how to develop quantitative methods for multicomponent analysis by diode-array ultraviolet-visible spectroscopy. Hewlett-Packard. Circle 483.

QuickerClave is a brochure about a series of stirred reactors designed for fast opening. Pressure Products Industries. Circle 484.

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ACADEMIC HEMATOLOGIST/ONCOLOGIST—Board-certified/Board-eligible individual with primary basic research interest to join the expanding combined hematology/oncology program at the Medical College of Virginia and McGuire Veterans Administration Hospital. The selected individual will have adequate protected time to develop his/her research program. Although we welcome all applications, we are particularly interested in individuals with research programs involving molecular and/or growth factor biology. Send letter of interest and résumé to: **Burt Adelman, M.D., Division of Hematology/Oncology, Veterans Administration Medical Center, 1201 Broad Rock Boulevard, Richmond, VA 23249.** An Affirmative Action/Equal Opportunity Employer.

ACADEMIC INFECTIOUS DISEASES IMMUNOLOGY RESEARCH GUTHRIE CLINIC GUTHRIE RESEARCH INSTITUTE

Applications are invited for a joint staff appointment at the Guthrie Clinic and the Guthrie Research Institute, the basic research component of the Guthrie Clinic/Medical Center complex located in Sayre, Pennsylvania. The position would involve 25% time doing clinical infectious diseases at the Guthrie Medical Center and 75% time doing basic immunology research at the **ASSISTANT OR ASSOCIATE SCIENTIST** level. The Institute is directed towards the study of basic immunology. Existing research programs involve cellular and biochemical aspects of cell-mediated cytotoxic responses; macrophage immunobiology and the production of cytokines; and the molecular biology of lymphoid surface antigens and cytokines. Sufficient start-up funds are available for a developing scientist, and abundant opportunities exist within the Medical Center for clinical research and basic-clinical collaborations. The Medical Center and Research Institute are attractively located in scenic northeastern Pennsylvania, and affordable housing is complemented by abundant nearby recreational and cultural facilities. Interested candidates should submit their curriculum vitae with three references and statement of interests to: **Frederick B. Rose, M.D., Chief, Infectious Diseases, Guthrie Clinic, Sayre, PA 18840.**

ALFRED FITLER MOORE PROFESSORSHIP IN OPTRONICS—A chaired professorship has been established in the Department of Electrical Engineering. The person appointed to this chair will be a distinguished scholar who has performed outstanding theoretical and practical research in optronics as related to communications, sensing, signal processing or device physics for system applications. The incumbent should be able to exercise scholarly leadership in the field. It is hoped that the appointee will be able to assume tenure by September 1989. Applications/nominations should be directed by 28 February 1989 to: **Professor Nabil H. Farhat, Chair, Alfred Fitler Moore Professorship in Optronics Search Committee, University of Pennsylvania, Electrical Engineering Department, Philadelphia, PA 19104-6390.** Equal Opportunity/Affirmative Action Employer.

ANATOMY/CELL BIOLOGY

Tenure-track position as **ASSISTANT PROFESSOR** in Human Biology beginning 28 August 1989. Ph.D. required. Primary teaching responsibilities will be introductory anatomy and physiology, cell biology and comparative anatomy, with contributions to biology and graduate programs as needed. Opportunities are available for interdisciplinary teaching and research is expected. Send curriculum vitae, transcripts (undergraduate/graduate) and three letters of reference by 10 March 1989 to: **Dr. T. Sager, Human Biology, ES 301, University of Wisconsin-Green Bay, Green Bay, WI 54311-7001.** Equal Opportunity/Affirmative Action Employer.

ASSISTANT OR ASSOCIATE PROFESSOR, BIOLOGY: Tenure-track position available August 1989 primarily teaching general biology for non-majors. Doctorate preferred, ABD considered; specialty in developmental or population biology or plant ecology desirable. Send letter of application, curriculum vitae, all undergraduate/graduate transcripts, and three letters of recommendation by 14 March 1989 to: **William Brunkhorst, Biology Department, University of Wisconsin-Whitewater, Whitewater, WI 53190.** Women, members of minority groups, persons with disabilities and Vietnam-Era veterans are encouraged to apply.

POSITIONS OPEN

ASSISTANT PROFESSOR DEPARTMENT OF PATHOLOGY

The Department of Pathology, Medical College of Ohio, seeks an innovative molecular biologist to: (i) Implement a diagnostic molecular biology laboratory as part of the clinical pathology laboratory service and, (ii) Initiate a strong research program in molecular carcinogenesis. Other responsibilities would include the teaching of molecular biology to residents, fellows and graduate students. Applicant should have an M.D. and/or Ph.D. with postdoctoral experience. Salary and fringe benefits are competitive. Expected appointment date is July 1989. Application, including curriculum vitae and the names of three references should be sent to: **Jonathan Myles, M.D., Department of Pathology, Medical College of Ohio, P.O. Box 10008, Toledo, OH 43699.**

ASSISTANT PROFESSOR positions, one tenure-track position and two, 1-year term appointments, subject to renewal, are available. Ph.D. is required. Applicants must teach introductory biology and work in pedagogical as well as content biology. The tenure-track position is for a Vertebrate Zoologist/Vertebrate Ecologist, #20752. Interest and expertise in animal behavior, aquatic biology, poikilotherm biology, are particularly desirable. One term position is for a Non-vascular Botanist, #21335, to teach introductory botany, and specialty area. The second term position is for a Microbiologist/Cell Biologist, #20828, to teach microbiology and/or cell biology. Submit by 1 March 1989 a letter of application, résumé, three references, transcripts, evidence of U.S. citizenship, statement of teaching philosophy to: **Dr. Ronald Plakke, Coordinator Search and Screen Committee, Department of Biological Sciences, University of Northern Colorado, Greeley, CO 80639.** Minorities and women encouraged to apply. The University is an Equal Employment Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE PROFESSOR, TENURE-TRACK. Department of Environmental Health, College of Public Health, University of Oklahoma at Oklahoma City, Health Sciences Center. Position available until filled. Minimum qualifications include an earned doctorate in environmental health or a closely related discipline, primary expertise in environmental planning/policy-making and/or risk analysis, demonstrated competence or evidence of outstanding promise in research, and proficiency in computer applications to environmental health. Additional consideration will be given to candidates having postdoctoral training, teaching and/or field experience. Applicants should submit a résumé and the names of four references to: **Ronald L. Coleman, Ph.D., Chair, Environmental Health Search Committee, College of Public Health, Department of Environmental Health, Post Office 26901, Oklahoma City, OK 73190.** The University of Oklahoma is an Equal Opportunity/Affirmative Action Employer.

ATMOSPHERIC MODELER/University of South Carolina. The University of South Carolina invites applications for a tenure-track position in the Marine Science Program and Department of Geological Sciences. The position, which is partially funded by the United States Geological Survey, will involve climate modeling on the regional scale, coupled atmosphere/ocean modeling, and coupled atmosphere/hydrologic modeling. Preference will be given to applicants with a strong background in modeling fluid mechanics and thermal processes. Experience with climate models such as the NCAR Community Climate Model and the GFDL ocean model and with parallel processing computers will be useful. A Ph.D. is required at the time of employment. Rank and salary will be commensurate with experience. The applicant should send a résumé, a cover letter stating research and teaching interests, reprints of representative papers, and three letters of recommendation to: **Dr. James C. Evans, Department of Geological Sciences, the University of South Carolina, Columbia, SC 29208.** Foreign nationals should indicate current U.S. immigration status. The deadline for receipt of application materials is 15 March 1989. The University of South Carolina is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR OF MEDICAL ONCOLOGY

The University of Colorado Health Sciences Center, Denver, Colorado, is seeking an M.D. or Ph.D. for tenure-track position (specialty-track may be selected after 4 years), who is interested in starting an independent laboratory-based research program. The position will involve no clinical responsibilities, with 100% protected time for laboratory research. Minor teaching or patient care roles may be undertaken at individual's discretion, and joint appointments can be arranged with other medical school departments. Laboratory space is available with appropriate funds for equipment and technical support during the transition to independence. Starting salary will be competitive, commensurate with experience. Applicants should submit curriculum vitae to: **Dr. L. Michael Glode, Division of Medical Oncology, University of Colorado Health Sciences Center, 4200 East 9th Avenue, Denver, CO 80262.** An Equal Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE PROFESSOR—MICROBIOLOGY

The St. Louis College of Pharmacy invites applications for a full-time (9-month) tenure-track position in microbiology starting fall 1989. Applicants should possess a Ph.D. in microbiology with special interest in medical microbiology. Responsibilities include teaching a survey course for nursing students and a two-semester sequence for pharmacy students. Send curriculum vitae, graduate transcripts, and names, addresses, and telephone numbers of three references by 1 March 1989 to: **Dr. R. J. Cooper, Director, Division of Biological Sciences, St. Louis College of Pharmacy, 4588 Parkview Place, St. Louis, MO 63110.** An Equal Opportunity Employer.

BIOCHEMIST, ASSISTANT RESEARCH level, available immediately to study the structure, mechanism of action and regulation of expression of lipogenic enzymes. Candidate must have experience in techniques of enzymology (enzyme purification and characterization, kinetic studies, protein chemistry and amino acid sequencing) and molecular biology (DNA library construction and screening, DNA cloning, isolation and sequencing). Send résumé and names of at least two referees to: **Children's Hospital Oakland, Human Resources, 747 52nd Street, Oakland, CA 94609.** Equal Opportunity Employer.

UNIVERSITY OF ALBERTA FACULTY OF REHABILITATION MEDICINE CARDIOVASCULAR OR CARDIOPULMONARY POSITION

Applications are invited for a tenure-track position in the Department of Physical Therapy at the University of Alberta. Applicants must possess a doctorate and have an active research program. A physical therapy background and postdoctoral experience would be an asset.

The University of Alberta offers Bachelor of Science and Master of Science degrees in physical therapy. A Ph.D. in rehabilitation is proposed.

Applicants should have research and teaching capability in cardiac and/or pulmonary rehabilitation and exercise. Other areas such as health education, occupational physiology and conditioning would be an asset.

Responsibilities include undergraduate and graduate teaching, graduate supervision, research and scholarly work and some administrative duties. A strong commitment to obtaining external research funding is expected. This appointment may be a joint appointment with the Department of Physical Education and Sports Studies and in this case, teaching and graduate supervision in both departments will be expected.

Salary commensurate with qualifications and experience. Range for assistant professor is from \$33,144 to \$47,280 (per annum); for associate professor, from \$41,390 to \$59,534 (per annum).

Qualified applicants should send curriculum vitae, stating teaching and research interests, and provide three references to: **Dr. Martha C. Piper, Dean, Faculty of Rehabilitation Medicine, 316 Corbett Hall, University of Alberta, Edmonton, Alberta, Canada T6G 2G4.**

Deadline for receipt of applications is 1 March 1989. The University of Alberta is committed to the principle of equity in employment.

POSITIONS OPEN

TRUDEAU INSTITUTE, INC. BASIC RESEARCH SCIENTISTS

The Trudeau Institute is always interested in receiving applications for tenure-track, full-time research staff position, from appropriately trained individuals. Appointments may be made at the assistant, associate, or full member (professor) levels, depending on scientific ability and past performance. Successful applications will be expected to develop independent research programs in **immunology, immunopathology, molecular immunology or related fields.**

The Trudeau Institute is a free-standing, not-for-profit, basic research Institute with modern facilities, up-to-date equipment, in-house animal production, efficient management and an international reputation for excellence. Current staff interests include: Cancer immunology, transplantation immunology, immunity to infectious and parasitic diseases, regulation of immune responses, and the production and function of cytokines. Adequate start-up funding for new projects is available from Institute resources. Salaries and benefits are competitive, and working conditions are conducive to a productive career in research.

Applications consisting of curriculum vitae, the names and addresses of three references, and a brief description of research interests should be addressed to:

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

BIOLOGISTS—The Claremont Colleges: Two full- and one half-time sabbatical replacement positions for 1989–90 to teach genetics or physiology plus introductory courses to major or non-major students. Salary negotiable. Have résumé, statement of goals and three reference letters sent by 15 March 1989 to: **Daniel A. Guthrie, Joint Science Department, The Claremont Colleges, 150 East 10th Street, Claremont, CA 91711.** An Affirmative Action/Equal Opportunity Employer.

CHAIR, DEPARTMENT OF PHARMACOLOGY, Stanford University. Stanford University School of Medicine is conducting a search for a chair for the Department of Pharmacology. Applications are sought from individuals who have both a demonstrated scholarly productivity in an active research program and an acknowledged history of providing quality education to medical and graduate students. *Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates.* Interested persons should submit their curriculum vitae to: **Dr. Byron W. Brown, Jr., Chairman, Pharmacology Search Committee, Department of Health Research and Policy, Stanford University School of Medicine, Stanford, CA 94305.**

CHAIR— MICROBIOLOGY AND IMMUNOLOGY

The Oregon Health Sciences University School of Medicine is seeking applicants for the position of Chair of the Department of Microbiology and Immunology. The faculty of this university-based department are engaged in research and in the instruction of medical students, graduate students and fellows. The position requires strong scientific, organizational and administrative skills. Submit curriculum vitae and references to: **Bruce Magun, Ph.D., Chairman, Microbiology Search Committee, L 215, Oregon Health Sciences University, Portland, OR 97201.** An Affirmative Action/Equal Opportunity Employer.

CHAIRMAN OF PATHOLOGY NEW YORK MEDICAL COLLEGE A MEDICAL UNIVERSITY VALHALLA, NEW YORK

Nominations and applications are invited for the position of Chairman and Professor of Pathology. Candidates must have an M.D. degree, a distinguished research record in pathology, experience in teaching students of medicine, an interest in graduate education, and have demonstrated leadership and administrative abilities. Applications with curriculum vitae and bibliography and names of three references should be sent to: **John C. McGiff, M.D., Chairman of the Search Committee, Department of Pharmacology, New York Medical College, Valhalla, NY 10595.** New York Medical College is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

BIOTECHNOLOGY PROGRAM DIRECTOR COLORADO ADVANCED TECHNOLOGY INSTITUTE (CATI)

A new position reporting to the Executive Director. Responsible for:

- Directing a bioprocessing center
- Establishing an incubator
- Directing a university/industry consortium

The position requires an advanced degree in science or engineering; 10 or more years of P&L and/or academic experience; management of a product from concept to market release; and interface with academic/government organizations.

To submit curriculum vitae/résumé, salary requirements, and three references or to request a written position description contact: **Mary Jackson, CATI, 555 17th Street, Denver, CO 80202.** Equal Opportunity Employer.

CELL AND MOLECULAR BIOLOGY

SUNY Plattsburgh seeks applicants for a **SABBATICAL REPLACEMENT** position for the 1989–90 academic year in the Department of Biological Sciences.

Duties: Requires teaching in a unique biotechnology program and other courses. A background in animal cell culture and/or immunology is desirable.

Qualifications: Ph.D. in biology required. Teaching experience necessary.

We encourage applications from candidates who can serve as role models for women and minority students.

Plattsburgh is located on the shore of Lake Champlain, an hour from Montreal, Lake Placid and Burlington, Vermont.

Closing date is 1 March 1989 or until position is filled.

Send letter of application, current résumé, and three current letters of reference to:

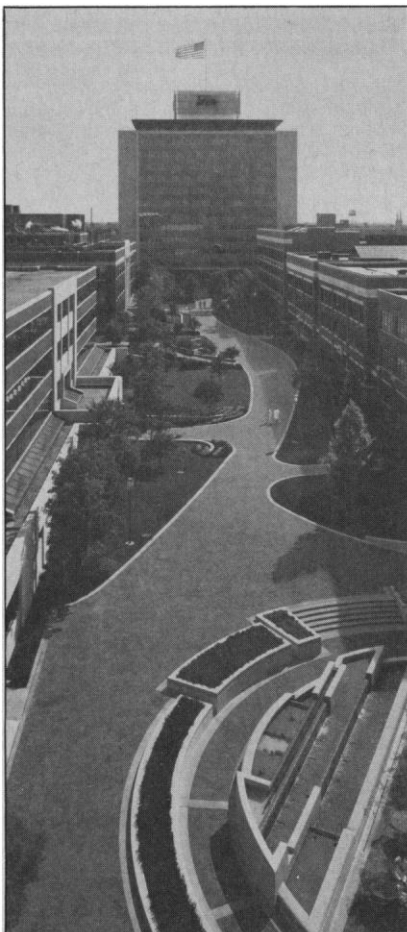
**Chair, Search Committee
c/o Office of Personnel/Affirmative Action
SUNY Plattsburgh
Box 1581-246
Plattsburgh, NY 12901**

SUNY is an Equal Opportunity/Affirmative Action Employer.

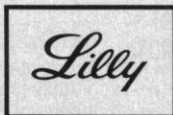
CRYSTALLOGRAPHY—A FACULTY POSITION (tenure-track or tenured) is available in the Program in Molecular Medicine at the University of Massachusetts Medical School. Applicants should have a Ph.D. and extensive postdoctoral experience, with a record of productivity in protein or nucleic acid structure determination by x-ray diffraction analysis. The successful applicant will be provided with funds to set up a crystallographic laboratory and research program, and will pursue extramural funds for the vigorous growth of that program. Extensive opportunities for collaboration exist in the Departments of Biochemistry, Cell Biology, Pharmacology, Physiology, and Molecular Genetics and Microbiology. Please forward curriculum vitae, a summary (one to two pages) of future research plans, and names of three references to: **Crystallographic Search Committee, Department of Pharmacology, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA 01655.** Applications will be reviewed beginning in January 1989, but will be accepted until the position is filled. *The University of Massachusetts is an Equal Opportunity/Affirmative Action Employer.*

DIRECTOR, GENETIC DIAGNOSTIC LABORATORY: A position available immediately for a Ph.D. with experience in molecular biology/biochemical genetics to direct a genetic diagnostic laboratory. There is ample opportunity for independent research and faculty appointment at Duke University Medical Center (rank dependent on experience). The candidate will join an established and growing, comprehensive academic genetic and metabolic program with expertise in clinical genetics, molecular and biochemical genetics associated with a major mass spectrometry facility. *Duke University is an Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae and three references to:

**Y. T. Chen, M.D., Ph.D.
Associate Professor of Pediatrics
Division of Genetics and Metabolism
Department of Pediatrics
P.O. Box 3028
Duke University Medical Center
Durham, NC 27710**



BS/MS DEVELOPMENTAL TOXICOLOGIST Toxicology Division



Equal Opportunity Employer

For more than a century, scientists at ELI LILLY AND COMPANY have developed innovative, high quality pharmaceutical products. In 1988, Lilly invested over \$500 million in research-and-development programs. More than 3,000 scientists at the company's Lilly Research Laboratories are pursuing creative research programs that involve many important health care needs.

To further build its research capabilities, Lilly is seeking self-motivated, innovative scientists for the Toxicology Division.

- To design and supervise reproduction/teratology studies on potential pharmaceutical and agricultural products.
- To analyze data and write reports for studies performed in Developmental Toxicology area.
- Bachelor's or Master's degree in Biology, Anatomy, Toxicology, Pharmacology, Physiology, or a related discipline is required.
- Expertise in conducting and reporting Reproduction and Teratology studies is preferred.
- Excellent oral and written communication skills are necessary.

Eli Lilly and Company is committed to scientific excellence. Lilly provides a stimulating professional atmosphere with many opportunities for collaborative, multidisciplinary research. The company offers an attractive total compensation program. Entry level and salary will be based upon each candidate's experience.

For prompt consideration, please forward your *résumé* to:

Maria L. Poor
Science Recruitment (AT-4)
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285

DIRECTOR

EPPLEY INSTITUTE FOR RESEARCH IN CANCER AND ALLIED DISEASES UNIVERSITY OF NEBRASKA MEDICAL CENTER

The University of Nebraska Medical Center invites nominations/applications for the position of Director of the Eppley Institute. The Eppley Institute currently has a multidisciplinary faculty of approximately 20 members holding joint appointments in various academic departments, and a total staff of approximately 120. It has been designated as one of 15 NCI Laboratory Cancer Research Centers and has received a Special Institutional Grant from the American Cancer Society. Graduate students and postdoctoral fellows are supported partially by an NIH Training Grant. The Director is responsible for all the activities of the Institute and reports directly to the Chancellor of the Medical Center.

The successful applicant should have an outstanding record of scientific accomplishment that would qualify him/her for the rank of Professor in a basic science department. The individual must be familiar with the activities of a modern health science center, cancer research funding programs and/or agencies, and have significant administrative experience. Evidence of an ongoing program in basic cancer research also is essential. Applicants should submit a current curriculum vitae and the names of three individuals who will serve as references. Closing date for receipt of applications/nominations is 15 February 1989. Applications/nominations should be sent to:

William O. Berndt, Ph.D.
Vice Chancellor for Academic Affairs
Room 5009 Conkling Hall
University of Nebraska Medical Center
42nd and Dewey Avenue
Omaha, Nebraska 68105

*The University of Nebraska Medical Center is an Affirmative Action/
Equal Employment Opportunity Employer.*

Project Manager

The Project Management Division of Smith Kline & French Laboratories is seeking individuals for multiple level positions with the appropriate knowledge and experience to assist in the design of new drug development strategies and identification of project milestones and objectives. Working with a Project Director and Project Team, the Project Manager will identify problems and determine solutions, coordinate and manage the submission of plans, monitor and document project-related activities.

The successful candidates will have:

- B.S./M.S. in a biomedical field.
- MBA, M.D., Ph.D. & Pharm. D. strongly encouraged to apply.
- Some experience in a biomedical field highly desirable.
- Proven analytical and organizational skills as well as outstanding interpersonal skills.
- Experience managing multidisciplinary teams in a leadership role is a definite plus.

Smith Kline & French Laboratories is located in a new, state-of-the-art research and development complex near Valley Forge, PA. We offer an excellent compensation, benefits and relocation package, as well as opportunities for significant career growth. Qualified candidates should send resume to Barbara J. Schwartz, Employment Administrator, S0071, SK&F 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

POSITIONS OPEN

DIRECTOR OF BIOSAFETY

The College of Veterinary Medicine at Cornell University seeks a Director of Biosafety. The successful candidate will have College-wide responsibility for institutional compliance with University, Local, State, and Federal regulations regarding the acquisition, use, and disposal of hazardous substances. The Biosafety Director will also have faculty responsibilities in the Toxicology Section of the New York State Diagnostic Laboratory which is an operating unit of the College.

Qualified candidates should possess a D.V.M./V.M.D. degree and have advanced training in clinical toxicology, toxicology or environmental health. Preference will be given to individuals who have board certification or eligibility in toxicology. Candidates should have exhibited organizational ability, initiative, and skill in correcting biohazard problems.

Candidates should submit a résumé and at least two references by 15 April 1989 to:

Dr. Douglas D. McGregor
Associate Dean for Research
College of Veterinary Medicine
Cornell University
Ithaca, NY 14853

Cornell University is an Equal Opportunity/Affirmative Action Employer.

ECOLOGIST—Tenure-track position, ecosystems focus, available fall 1989. The successful applicant will develop a quality, externally-funded research program, and teach undergraduate, M.S., and Ph.D. students. Appointment expected at assistant professor level, but exceptional candidates may be considered at advanced levels. Lehigh University has both marine and freshwater research stations and is actively developing interdisciplinary programs. **SEND CURRICULUM VITAE, REPRINTS, STATEMENT OF RESEARCH INTERESTS, AND NAMES, ADDRESSES AND TELEPHONE NUMBERS OF THREE REFERENCES** by 10 February 1989 to: **Dr. Craig Williamson, Search Committee Chair, Department of Biology # 31, Lehigh University, Bethlehem, PA 18015.** *Lehigh University is an Equal Opportunity/Affirmative Action Employer.*

EXPERT WITNESS NEEDED: I seek an expert qualified to analyze the quality of research project and papers in the area of Nuclear Physics. Topics of papers were 1. "Diffraction Intensity from Vibrating Crystals." 2. Decay Scheme of ^{188}Hg . 3. Study of Alpha Decay of Neutron Deficient Isotopes in the Lead Region Including The New Isotopes Pb ($A \leq 188$) and Tl ($A = 182$). Must be willing to testify in court case against Virginia Tech, will pay fees and expenses, contact: **Gerald T. Zerk, Esq., 2nd and Franklin Streets, Linden Tower Professional Centre, Suite 108, Richmond, VA 23219; Telephone: 804-788-4412.**

FACULTY POSITION CELL BIOLOGY

The Department of Biology of the University of Wisconsin-River Falls (UW-RF) invites applications for a tenure-track faculty position at the assistant professor level, effective 1 September 1989. Teaching responsibilities will include cell biology and bacteriology, alternate year offerings in virology and animal cell culture, and participation in introductory biology. Research involving students is encouraged and supported. Applicants must have a Ph.D., experience in cell or tissue culture and demonstrated potential for excellence in teaching. A well-equipped cell culture facility is available in the department and the successful applicant will have the opportunity to participate in implementing a new interdisciplinary major in biotechnology. *Applications from qualified women and members of minority groups are particularly encouraged.* Please send a letter of application, curriculum vitae, transcripts and three letters of reference by 6 March 1989 to: **Dr. Clarke E. Garry, Biology Search Committee, Department of Biology, University of Wisconsin-River Falls, River Falls, WI 54022.** UW-RF, a comprehensive university with over 5000 students, offers bachelor's and master's degrees and is ideally located in the scenic Kinnickinnic River Valley just 30 miles from Minneapolis/St. Paul, Minnesota. *The University of Wisconsin-River Falls is an Equal Opportunity/Affirmative Action Employer.*

OPPORTUNITIES FOR MOLECULAR VIROLOGISTS

Committed To
Scientific
Excellence



The Sterling Research Group, the worldwide pharmaceutical research and development organization of Sterling Drug, Inc., announces two openings in the expanding antiviral research program in the Microbiology Department at Sterling's Rensselaer, New York facility.

GROUP LEADER

The successful candidate will possess a Ph.D. degree in virology or molecular biology with relevant postdoctoral training and a minimum of 3-5 years industrial experience. The scientist will be expected to supervise and participate in a group applying current molecular techniques to the analysis of the replication and pathogenesis of several viruses of biomedical importance. Supervision of senior scientific staff is expected and strong interpersonal and communication skills are required.

SENIOR RESEARCH BIOLOGIST

The successful candidate will possess a Ph.D. in virology or molecular virology with relevant postdoctoral experience. The scientist will be expected to participate in the identification of new molecular targets for chemotherapeutic intervention.

Located near Albany, New York, we offer an attractive salary and benefits package as well as opportunities for professional development in a dynamic environment utilizing a multidisciplinary approach to research. Interested scientists should send curriculum vitae in confidence to:

Mr. John P. Harvey
Employment Manager

STERLING RESEARCH GROUP
A Division of Sterling Drug Inc.

Columbia Turnpike
Rensselaer, New York 12144

A Subsidiary of
Eastman Kodak Company

Equal Opportunity Employer M/F/H/V

Career Opportunities in Plant Biology

The Plant Genetics Department at Pfizer Central Research, in conjunction with numerous plant breeding stations worldwide, conducts research and development for DeKalb-Pfizer Genetics, a leading agricultural seed company. We invite applications from scientists eager to join our multidisciplinary team focused on the genetic manipulation of maize. Depending on your experience and interests, you will participate in innovative research focused towards understanding the biochemical and molecular basis of important agronomic traits of maize, and the development of technology to permit the *in vitro* manipulation of the maize genome. You should have an MS or BS degree with postgraduate research experience in one or more of the following areas of plant biology:

- Tissue Culture
- Cell Biology
- Molecular Biology
- Biochemistry

In addition to a stimulating scientific environment, we offer a competitive compensation/benefit package and relocation assistance to an attractive southeastern Connecticut shore community. Qualified applicants should submit their resume and the names, addresses and phone numbers of three professional references to: **Mrs. Lorraine C. Corr, Personnel Associate, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.** An equal opportunity employer.

Pfizer

KUWAIT INSTITUTE FOR SCIENTIFIC RESEARCH

Kuwait Institute for Scientific Research (KISR) is a nonprofit organization with a staff of more than one thousand employees engaged in applied research in the fields of environmental and earth sciences; food resources; engineering; petroleum, petrochemicals and materials and techno-economics.

KISR has the following vacancies:

ORNAMENTAL HORTICULTURIST

• *Major Duties:*

- Studying performance of ornamental trees, shrubs and ground covers under arid environment.
- Investigating and introducing new ornamental plants suitable for hot and arid environment and under saline water conditions.
- Assessing various cultural practices for establishment of landscaping and ornamental plants.
- Recommending necessary landscaping practices, greenery activities and turf management.

• *Qualifications:*

Applicants should have a Ph.D. in Horticulture with 4 to 6 years experience in ornamental plants, afforestation and landscaping in addition to knowledge of plantation in arid regions and physiological stresses of plants.

DATE PALM TISSUE CULTURIST

• *Major Duties:*

- Developing plant tissue culture methodology for micropropagation research on date palms, with eventual inclusion of other plant species.
- Supervising and coordinating plant tissue culture laboratory activities and providing training in plant tissue culture methodology.
- Optimizing micropropagation systems for ultimate commercial application.
- Conducting intensive plant research including nutrition, metabolism, and environmental tolerance.
- Overseeing and guiding greenhouse acclimation and establishment of micropropagated plants.

• *Qualifications:*

Applicants should have a Ph.D. in one of the basic plant sciences (Botany, Breeding, Physiology) with emphasis on tissue culture and/or advanced molecular genetics and its application in developing new cultivars. Strong background in plant physiology is an advantage. Five or more years of research experience in tissue culture with documented expertise in date palm tissue culture (somatic embryogenesis and/or organogenesis) as well as use of somaclonal variation in developing stress tolerant crop plants. Working experience overseas is an advantage.

KISR offers attractive tax free salaries commensurate with qualifications and experience and generous benefits that include gratuity, free furnished air-conditioned accommodation, school tuition fees for children, contribution to a savings plan, six weeks annual paid vacation, air tickets, free medical care and life insurance.

Interested applicants are requested to send their Curriculum Vitae with supporting information not later than one month from the date of this publication, to:

Director General
Kuwait Institute for Scientific Research
P.O. Box 24885 Safat
13109 Safat—KUWAIT

MANAGER CLINICAL WRITING

Wyeth-Ayerst Research is a leading developer and producer of prescription drugs, biologicals and infant nutritionals. We're firmly committed to advancing the art and science of medicine, having researched and developed hundreds of valuable drug products for the health and well-being of people throughout the world. We have an immediate opportunity in our Clinical R&D department in Radnor for a Manager of Clinical Writers.

As Manager, you will direct and coordinate the daily activities of writers who are preparing new drug applications, manuscripts and abstracts for a wide variety of clinical products. As liaison between writers and other departments, you will provide technical guidance, schedule and review, as well as provide quality control for all writing projects.

The candidate we seek will have a minimum of a BA/BS degree (preferably in biological or chemical sciences) - Ph.D degree preferred - and a minimum of 2 years experience supervising technical writers. A pharmaceutical background and clinical research experience would be significant assets. Proven writing skills as well as excellent organizational and leadership qualities are also required.

We offer a competitive salary and extensive company benefits. For immediate consideration, please send resume and salary history to:



Recruitment Manager, Position #316,
Wyeth-Ayerst Laboratories, Clinical
R&D, P.O. Box 8299, Philadelphia, PA
19101. An equal opportunity employer,
M/F/H/V/ responses encouraged.

Senior Scientist Contact Lens Care Research

Alcon Laboratories, a \$500 million plus pharmaceutical manufacturer of ophthalmic preparations and contact lens care products, is currently seeking an innovative biochemist for the Optical Department's Lens Care Research unit.

Responsibilities will include participation in interdisciplinary team investigations on the nature and mechanism of evolvment of deposits on contact lenses and on development of novel means for prevention and removal of such contaminants. The qualified applicant will possess a Ph.D. degree in Biochemistry with relevant experience in modern biochemical techniques applicable to the separation, identification and quantification of components of the com-

plex mixtures of protein, lipid, mucin and inorganic entities comprising contact lens deposits. Experience in enzyme biochemistry is also desired.

We offer competitive starting salaries, company-paid benefits, an excellent profit-sharing plan, and a desirable Fort Worth location with numerous recreational, cultural and economic advantages. If you are seeking an opportunity involving challenging work within a dynamic state-of-the-art research environment, please send resume with salary history to: **Sherry H. Rightmer, Employment Supervisor, Alcon Laboratories, Inc., P.O. Box 6600, Fort Worth, Texas 76115.**

Equal Opportunity Employer, M/F/V/H • Principals Only, Please

Alcon®
LABORATORIES

POSITIONS OPEN

THE UNIVERSITY OF CALIFORNIA, LOS ANGELES

UCLA School of Medicine and the Molecular Biology Institute are expanding programs in Molecular Immunology and Molecular Genetics. Several tenure-track positions are available at a level commensurate with experience for faculty with outstanding research programs. UCLA is an Affirmative Action/Equal Opportunity Employer. For those interested in molecular immunology, write to: **Professor Owen N. Witte, Molecular Biology Institute, Room 364, 10833 Le Conte Avenue, Los Angeles, CA 90024-1570.** For those interested in molecular genetics, write to: **Professor Larry J. Shapiro, Harbor/UCLA Medical Center, Division of Medical Genetics, Building E4, Room 28, 1000 West Carson Street, Torrance, CA 90509-1768.**

FACULTY POSITION. The Department of Pharmacology, Creighton University School of Medicine, invites applications for a tenure-track position at the level of assistant or associate professor. Applicants should have a Ph.D. in pharmacology and 2 years of postdoctoral experience, as well as a commitment to research and an interest in teaching professional students, and graduate students. Current research interests in the Department include pharmacology of: secretion, the central nervous system, smooth muscle, adrenergic receptors and peptides, as well as renal pharmacology and mediators of inflammation. Individuals interested in receptor mechanisms, membrane transport, intracellular mediators or cytopharmacology in these areas are encouraged to apply. Interested individuals should send an outline of future research plans, curriculum vitae, and the names of three references to: **Dr. Frank Dowd, Chairman, Department of Pharmacology, Creighton University, Omaha, NE 68178.** Creighton University is an Equal Opportunity/Affirmative Action Employer.

FLORICULTURE FACULTY POSITION. Nine-month tenure-track in horticulture, interior plantscaping emphasis available 16 September 1989. Instructor or assistant professor dependent on qualifications. Minimum: Master's or all but dissertation, at least one degree in horticulture, plant science, or closely related field; successful teaching experience. To apply send application letter; résumé including education, dates and types of work experience, honors, professional organizations, publications; official transcripts; three current reference letters; names, addresses and phone numbers of two additional references by 10 February 1989; or for a detailed job description or for further information, contact: **Robert Krumwiede, University of Minnesota Technical College, Waseca, Waseca, MN 56093. Telephone: 507-835-1000.** The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

GENETICS APPLICATIONS COMPUTER PROGRAMMER. Position Responsibilities: Opportunity to become involved in Human Genome Initiative (genetic mapping, physical mapping, and sequencing) and help develop systems for data analysis and integration of data sets at the Center for Genetics in Medicine at Washington University Medical School. Major responsibility will be construction of genetic linkage maps of human chromosomes. Established program packages will be implemented and new analysis methods and programs will be developed. Will work directly with laboratory head and other laboratory members and interact on a collaborative basis with members of Genetics Department, Biomedical Computer Laboratory and Computer Science Department.

Qualifications: Masters or equivalent experience in either computer science/mathematics with some genetics background or major strength in biology/genetics with exceptional skills in mathematics and programming. Experience in developing programs in C language required; familiarity with APL language would be useful. Familiarity with VAX or MICROVAX desirable. Course work in statistics and basic probability theory as well as intermediate calculus and biology required. Start date: February/March 1989. Salary: Commensurate with experience. Send curriculum vitae to: **Dr. Helen Donis-Keller, Professor of Genetics, Genetics Department, Washington University Medical School, Box 8031, St. Louis, MO 63110.**

POSITIONS OPEN

FACULTY POSITION CELL BIOLOGIST PRINCETON UNIVERSITY

We are soliciting applications for an assistant professorship as part of our program to strengthen molecular and biochemical cell biology at Princeton. The position will be in the Department of Biology which resulted from the recent fusion of the preexisting Departments of Biology and Molecular Biology.

Submit a brief description of proposed research program, curriculum vitae, and a list of references to: **Dr. J. E. Rothman, c/o L. Abele, Department of Biology, Lewis Thomas Laboratory, Princeton University, Princeton, NJ 08544-1014.**

Princeton University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN EUKARYOTIC AND/OR DEVELOPMENTAL GENETICS

The newly designated Department of Molecular and Cell Biology seeks to fill a position in its Division of Genetics at either a junior (tenure-track) or senior level effective 1 July 1989 (pending budgetary approval).

The successful applicant will be expected to develop a vigorous research program that utilizes molecular and/or classical genetics to approach problems of eukaryotic cell or developmental biology. Responsibilities will include undergraduate and graduate teaching in genetics.

Applicants should submit curriculum vitae including a statement of research and teaching interests, reprints, and names and address of at least three references by 1 March 1989 to:

**Dr. Corey Goodman
Department of Biochemistry
University of California at Berkeley
Berkeley, CA 94720**

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

GRAPHICS CONSULTANT/ COMPUTATIONAL CHEMIST

The Life Sciences Division of SRI International has an opening for a computational chemist who will work in close collaboration with experimentalists in the application of quantum chemical and empirical energy methods and molecular graphics to specific interdisciplinary projects. Such collaborative projects will include drug design and structural studies of bioactive peptides, proteins, and nucleic acids. Additional responsibilities will include training and consulting with users of molecular graphics workstations. The successful candidate should have the ability to develop their own research programs in the molecular modeling field.

The position requires a Ph.D. in computational chemistry with some knowledge of ab initio and semi-empirical quantum mechanics, as well as application of these methods to problems in drug development. Some knowledge of statistical mechanics, including molecular dynamic simulations and scientific programming is desirable.

Send résumé to: **R. A. Solomon, AA-211, SRI International, 333 Ravenswood Avenue, Menlo Park, CA 94025.** An Equal Opportunity Employer.

LECTURER IN BIOLOGY CARLETON COLLEGE

The Department of Biology invites applications for a full-time, 1-year, non-tenure-track appointment with the possibility of renewal. The position begins September 1989. Teaching duties include full responsibility for an intermediate-level course in vertebrate biology, participation in several team-taught introductory biology courses and, where appropriate, a seminar in the field of interest.

Minimum requirements: A Ph.D. is preferred, and the degree may be in biology, ecology and zoology.

Please send résumé, undergraduate and graduate transcripts and three letters of reference to:

**Dr. John L. Tymoczko, Chairman
Department of Biology
Carleton College
Northfield, MN 55057**

Closing date for applications is 1 March 1989. Carleton College is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

FUNGAL GENE EXPRESSION

TWO POSTDOCTORAL POSITIONS to join a project studying proteins and DNA sequences involved in co-regulating *N. crassa* ribosomal RNA and protein genes. Approaches will include in vitro mutagenesis, in vitro transcription, fungal transformation, transcription factor isolation. Experience required in protein chemistry or molecular biology. One position available immediately, the second from April 1989. Salaries \$20,000 to \$27,000, depending on experience. Send curriculum vitae plus names of three referees to: **Brett Tyler, Department of Plant Pathology, University of California-Davis, Davis CA 95616.**

FUNGAL MOLECULAR BIOLOGIST

The Department of Botany invites applications for a tenure-track position in fungal molecular biology at the assistant professor level starting 15 August 1989. Research experience in fungal molecular biology or genetics is required and postdoctoral experience preferred. The successful applicant will be expected to develop an extramurally funded research program employing molecular techniques to investigate fungal pathogenicity in higher plants and to contribute to the curriculum in his/her area of specialty. Send curriculum vitae, summary of planned research, reprints of published work, and arrange that three letters of recommendation be sent by 15 March 1989 to: **Dr. Steven W. Hutcheson, Chair, Fungal Molecular Biology Search, Department of Botany, University of Maryland, College Park, MD 20742-5815.**

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

KARISOKE RESEARCH DIRECTOR. Position open 1 December 1989 for director of Karisoke Research Center, Rwanda, Africa. Director supervises personnel in studies and observation of mountain gorillas. Carries out independent research and also sees that long-term data files are analyzed and updated. Responsible for efficient camp operations (including trackers, guards, anti-poaching patrols), maintenance of accurate financial records, and submission of required reports. Must be able to communicate in French and English (Swahili helpful) with governmental, park, camp and other personnel. Requires a knowledge of observational methods and protocols. Center personnel includes 25 Rwandan nationals and three to six graduate researchers. Contract for 1 year, renewable for a second year. Send letter of application, curriculum vitae (or résumé), and names of three references to: **The Digit Fund, 45 Inverness Drive East, Englewood, CO 80112.**

LANDSCAPE FACULTY POSITION. Nine-month tenure-track in horticulture, landscape emphasis available 16 September 1989. Instructor or assistant professor dependent on qualifications. Minimum: Master's or all but dissertation, at least one degree in horticulture, plant science, or closely related field; successful teaching experience. To apply, send application letter; résumé including education, dates and types of work experience, honors, professional organizations, publications; official transcripts; three current reference letters; names, addresses and phone numbers of two additional references by 10 February 1989; or for a detailed job description or further information, contact: **Robert Krumwiede, University of Minnesota Technical College, Waseca, Waseca, MN 56093. Telephone: 507-835-1000.** The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

MAYTAG FELLOW IN ZOOLOGY ARIZONA STATE UNIVERSITY

Intended for recent Ph.D.'s showing exceptional ability in research, this 1-year postdoctoral research fellowship emphasizes collaborative research with a faculty member in the Department. Applications must include curriculum vitae, three letters of recommendation, a statement of research plans, and a letter from the intended faculty collaborator at ASU. Review of applications will end 1 March 1989, starting date 16 August 1989. Applications from two individuals wishing to share the position will be considered. ASU is an Affirmative Action/Equal Opportunity Employer. For more information contact: **Dr. Steven W. Rissing, Department of Zoology, Arizona State University, Tempe, AZ 85287-1501. Telephone: 602-965-3847.**

Applications are invited for the
M.C. Chang
Postdoctoral Fellowships
in
Male Fertility Research

supported by the Andrew W. Mellon Foundation at
The Worcester Foundation for Experimental Biology

The Worcester Foundation's Male Fertility Program emphasizes multidisciplinary approaches to the study of male reproductive biology utilizing state-of-the-art techniques in biophysics, biochemistry, and cell and molecular biology. The faculty and their research interests are:

Lawrence J. Dangott: Receptors and mechanisms of chemical signaling in spermatozoa

Grant Fairbanks: Mechanism of sperm plasma membrane modification during epididymal maturation

Daniel L. Kilpatrick: Gene transcription during spermatogenesis using transgenic mice; paracrine function of testicular peptides

John A. McCracken: Studies on sperm maturation, motility, and capacitation using surgical diversion of the male and female ducts

Clare M. O'Connor: Regulation of protein modification and turnover during gametogenesis

George B. Witman: Control of sperm motility during maturation and capacitation; phosphorylation of sperm flagellar proteins

David E. Wolf: Diffusion and control of membrane regionalization, sperm maturation, capacitation, and fertilization

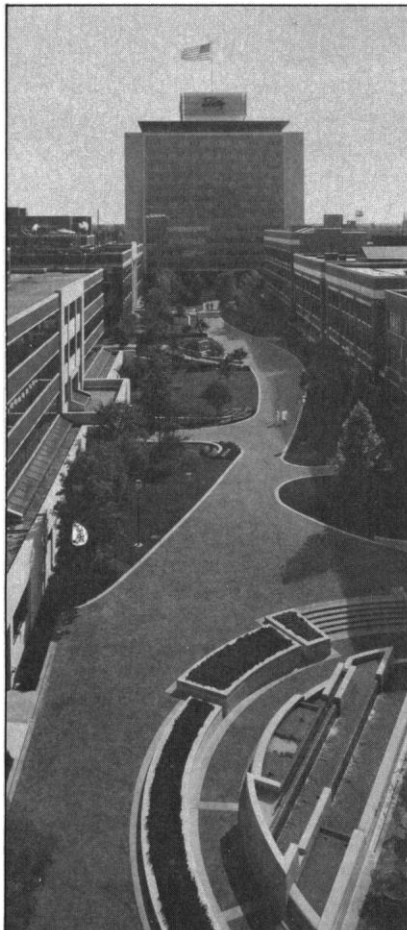
Carol A. Ziomek: Membrane structure and cell polarity in early mouse development

The Worcester Foundation is a private, nonprofit biomedical research institute offering excellent facilities and a stimulating research environment. Please send curriculum vitae and names of three references to the faculty member of interest, c/o **Male Fertility Program, Personnel Office, Worcester Foundation for Experimental Biology, Shrewsbury, MA 01545.**



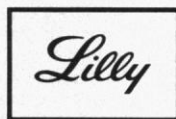
**WORCESTER FOUNDATION
FOR EXPERIMENTAL BIOLOGY**

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER M/F/H



BS/MS PROTEIN CHEMIST

Molecular Biology Research



Equal Opportunity Employer

For more than a century, scientists at ELI LILLY AND COMPANY have developed innovative, high quality pharmaceutical products. In 1988, Lilly invested over \$500 million in research-and-development programs. More than 3,000 scientists at the company's Lilly Research Laboratories are pursuing creative research programs that involve many important health care needs.

To further build its research capabilities, Lilly is seeking a self-motivated, innovative scientist to join the Molecular Biology department and work in a laboratory dedicated to analytical biochemistry. The scientist will work with a state-of-the-art two-dimensional gel electrophoresis image analysis system and a gas phase sequencer.

- Bachelor's degree with experience or Master's degree in protein chemistry or biochemistry is required.
- Knowledge of protein/enzyme purification methodology is essential, including HPLC, column chromatography, and electrophoresis.
- Experience in protein sequencing and characterization are desirable.

Eli Lilly and Company is committed to scientific excellence. Lilly provides a stimulating professional atmosphere with many opportunities for collaborative, multidisciplinary research. The company offers an attractive total compensation program. Entry level and salary will be based upon each candidate's experience.

For prompt consideration, please forward your *résumé* to:

Maria L. Poor
Science Recruitment (AMB-1)
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285

POSITIONS OPEN

MOLECULAR NEUROTOXICOLOGY

One-year renewable appointment at the **RESEARCH ASSOCIATE III** level (state-funded, nontenure-track) available on or after 1 January 1989 to join a multidisciplinary research team investigating molecular mechanisms of insecticide neurotoxicity and the role of altered target sites in insecticide resistance. This person will assume responsibility for ongoing studies of messenger RNA-directed expression and pharmacological characterization of mammalian and insect neuroreceptors and ion channels in *Xenopus* oocytes. In addition, he/she will have opportunities to interact with and participate in parallel studies of the isolation of receptor and ion channel genes and the biochemical characterization of insecticide interactions with target macromolecules. A Ph.D. in physiology, pharmacology, toxicology, or other relevant discipline is required; applicants with prior experience in intracellular microelectrode recording and voltage clamp techniques will be given preference. To apply, send curriculum vitae, publication list, and names of three references to: **Dr. David M. Soderlund, Insecticide Toxicology Laboratory, Department of Entomology, NYSAES, Cornell University, Geneva, NY 14456. Telephone: 315-787-2364. Cornell University is an Equal Opportunity/Affirmative Action Employer.**

MOLECULAR VIROLOGIST

A staff position is available for a person with experience in the molecular biology of primate viruses. The successful candidate would be expected to become involved with research programs involving simian immunodeficiency disease as well as to establish his/her own area of research. Ongoing research includes studies investigating the interrelationships of opportunistic viruses with Simian Immunodeficiency Virus. The applicant would be expected to obtain research support as well as to work collaboratively with other investigators. Please send résumé, a summary of research interests, and the names of three references by 15 February 1989 to: **Dr. Michael Murphey-Corb, Delta Regional Primate Research Center, Three Rivers Road, Covington, LA 70433.**

NEUROBIOLOGIST POSITION available. The Departments of Anatomy and Physiology invite applications for faculty positions at the rank of assistant or associate professor. Candidates should have a Ph.D. or M.D. degree with sound training and research experience. The successful candidate will be expected to develop and maintain a strong independent research program, and to participate in teaching medical and graduate students. Some emphasis will be placed on research at the cellular, metabolic or molecular level, but other areas will be considered as well. Start-up funds are available. Salary will be commensurate with qualifications. The starting date is negotiable. Recruitment will continue until suitable candidates are identified. Please send a description of research interests, curriculum vitae, and the names of three references to: **Dr. Timothy Hansen, Neurobiology Program Coordinator, University of Health Sciences/The Chicago Medical School, 3333 Green Bay Road, North Chicago, IL 60064.**

NEUROCHEMIST

The Institute for Sensory Research at Syracuse University seeks applications from individuals working in the area of neurochemistry for a tenure-track position at the level of assistant or associate professor. The successful candidate is expected to develop a strong independent research program and to teach in the graduate neuroscience program. The appointment will begin 1 September 1989. The position is supported by substantial start-up funds and newly constructed laboratory space. Applications should include curriculum vitae, representative reprints, and a statement of aims for future research. Applicants should have three individuals send letters of recommendation. Send all material to: **Dr. Gustav A. Engbretson, Neurochemistry Search Committee, Institute for Sensory Research, Syracuse University, Syracuse, NY 13244-5290. Deadline for applications is 28 February 1989. Syracuse University is an Equal Opportunity Employer.**



EnSys Inc. is applying biotechnology principles to the development of proprietary test kits for the environmental industry. Situated in Research Triangle Park, North Carolina, we are seeking to fill senior technical positions. EnSys offers competitive salaries, benefits, and equity participation.

FABRICATION ENGINEER. Responsibilities include the design and fabrication of an immunoassay test device. Technical degree and experience with small fluid handling/delivery devices are required.

SENIOR SCIENTIST—IMMUNOLOGY. Responsibilities include the organization and supervision of an immunoserology department that will produce and characterize anti-hapten polyclonal/monoclonal antibody. A Ph.D. and two years supervisory experience in Hybridoma technology are required.

SENIOR SCIENTIST—BIOORGANIC CHEMIST. Responsibilities include the organization and supervision of a BioOrganic Chemistry department that will produce and synthesize hapten conjugates and develop sample processing protocols. A Ph.D. and two years supervisory experience are required.

Forward resumes to: **Dr. Stephen B. Friedman, EnSys Inc., P.O. Box 14063, Research Triangle Park, NC 27709.**

FACULTY POSITION PRINCETON UNIVERSITY

The Program in Atmospheric and Oceanic Sciences and the Department of Geological and Geophysical Sciences at Princeton University invite applications for a faculty position within the Program. The position can be filled at either a junior or senior level. Applicants with expertise in any of the scientific fields covered by the Program (geophysical fluid dynamics, meteorology, physical oceanography, climate dynamics, atmospheric and oceanic chemistry) will be considered. We encourage applicants whose research would have strong links with the ongoing activities at the Geophysical Fluid Dynamics Laboratory of the National Oceanic and Atmospheric Administration, many of whose scientists hold faculty positions within the Program. We also seek to build stronger ties between the Program and the Department of Geological and Geophysical Sciences, particularly in the area of paleoclimatology. Those with expertise in the interaction between land surface processes and climate or in other interdisciplinary areas closely related to the research interests of the Program faculty are also encouraged to apply. Please send curriculum vita, statement of research interests, and the names, addresses, and phone numbers of three references to:

**Prof. Jorge Sarmiento, Director
Program in Atmospheric and Oceanic
Sciences
Princeton University
P.O. Box 308
Princeton, NJ 08542**

*Princeton University is an equal opportunity/
affirmative action employer.*

HEAD, ENDOTHELIAL CELL RESEARCH

Berlex Laboratories, Inc. is a leader in basic research of endothelial cell function. We currently seek an internationally recognized scientist in endothelial cell biology to join our highly visible team to ensure progress of on-going programs, to initiate new research directions and to be part of future breakthroughs which can be applied to better understanding and novel treatment of atherosclerosis. The successful candidate will have the title of Investigator, the second highest rank in our scientific ladder.

To qualify, your background should include a Ph.D. in cell biology, biochemistry, physiology or molecular biology, at least five (5) years of post-doctoral training and an excellent publication record. Experience with endothelial cell biology is highly desirable.

Berlex Laboratories is part of a global family of companies engaged in the research, development, manufacturing and marketing of chemical-pharmaceutical products in 120 plants and subsidiaries in 140 countries, employing over 25,000 people. Combined sales are in excess of \$2.7 billion.

At Berlex Laboratories, you will be supported, recognized and encouraged to pursue your scientific career and ideas. In addition to the excellent resources and stimulating research environment, the position offers an attractive salary and benefit package. For immediate, confidential consideration, send your CV and salary history to: **Lila Bernstein, Manager, Human Resources, BERLEX LABORATORIES, INC., 110 East Hanover Avenue, Cedar Knolls, NJ 07927. Equal opportunity employer M/W/H/V.**

BERLEX
Laboratories, Inc.

Glaxo's Growth Is Your Opportunity

Glaxo Inc. is not only one of the Top 5 ethical pharmaceutical firms in America, we're also the fastest growing research-oriented company in the country. As such, we can offer exceptional career opportunities, state-of-the-art facilities, and a firm commitment to producing the most effective pharmaceuticals that experience, imagination, and advanced technology can create. Join Glaxo, and apply your knowledge and career ambitions where they'll do you the most good.

We currently have the following positions available at our Corporate Headquarters located in Research Triangle Park, N.C.

RESEARCH GROUP LEADER

Analytical Development Clinical Pharmacokinetics Department

This person will be responsible for analytical method development to support clinical studies for investigational drugs. The job responsibility includes development of quantitative drug/metabolite assays employing HPLC, GLC, GC or LC/MS; transferring assays from other Glaxo research laboratories and improving existing assays. This person will work in collaboration with chemists responsible for automated assays, pharmacokineticists who will design and assist in the data analysis of clinical studies, and chemists from a preclinical drug metabolism department who perform drug/metabolite isolation and identification. This person will hire and supervise two M.S. or Ph.D. level people.

Background must include a Ph.D. in Analytical Chemistry or a related area with 3-5 years' experience in the pharmaceutical industry or academia. A strong chromatography background with excellent problem solving skills are required, as well as experience with a variety of chromatographic techniques (e.g. EC/LC, HPTLC, GC, LC, GC/MS). RIA experience will be useful, but is not required. Computer literacy will be helpful using micro and mainframes and experience using data acquisition systems (e.g. LAS, MAXIMA, NELSON).

Candidates responding to this position should refer to Job #8620X830 on all resumes.

RESEARCH ASSISTANT

Working with our growing research team within the Chemotherapy Department, this key individual will perform basic research studying the biologic, biochemical and molecular basis of tumor progression and metastasis. The individual will be responsible for the isolation, selection and characterization of metastatic tumor cell variants both in vivo and in tissue culture. Other responsibilities will include: isolation, purification and cloning of genes coding for important proteins/glycoproteins which regulate the metastatic process; and assisting in the operation of screening operations within the laboratory.

Background must include an MS with 2-5 years of experience or BS/BA with 5-10 years experience. The ideal candidate must have experience in tissue culture, electrophoresis (ID/2D) and protein Purification techniques. Experience in antibody production, animal handling, DNA/mRNA isolation, preparation of DNA libraries and a desire to work independently are highly desirable.

Candidate responding to this position should refer to Job #9120X942 on all resumes

At Glaxo Inc., growth opportunities and up-to-date facilities are complemented by a location (near Raleigh/Durham) that has excellent resources in close proximity. Prestigious universities, scenic vistas, lively recreational areas, and exciting cultural opportunities are all a part of the daily life of the Glaxo professional. Further, we reward talent and creativity with an excellent salary and benefits package (including a completely equipped, on-site athletic facility). Candidates interested in these positions, please send your resume, including salary history and CORRESPONDING JOB#AS MENTIONED ABOVE, to:

Human Resources Department

Glaxo Inc.

PO Box 13398

Research Triangle Park, N.C. 27709

(No Phone Calls, Please)

No Private Agency Referrals, Please

An Equal Opportunity Employer M/F/H/V

Paving the way to a healthier world.



POSITIONS OPEN

OCCUPATIONAL MEDICINE/ENVIRONMENTAL HEALTH (OM/EH). Tenure-track faculty position for senior scientist to direct a newly established Southeastern Clinical OM/EH Evaluation Center at Emory University and an OM/EH educational track in Emory's MPH Program. Nominations and applications are invited from established clinicians Board-certified in OM and eligible for licensure in Georgia. responsibilities include the direction, management, planning and development of an OM/EH Center and educational track committed to excellence in patient care, teaching and research. Also required are demonstrated leadership capabilities, previous academic, teaching, and administrative responsibilities, and a strong record in research. Salary is negotiable. Applications should include current curriculum vitae, the names of three references, and be submitted by 1 February 1989 to **Chair, Search Committee, Emory Department of Community Health, 69 Butler Street, SE, Atlanta, GA 30303-3219.** An Affirmative Action/Equal Opportunity Employer.

PHARMACOLOGIST

Northeastern University College of Pharmacy and Allied Health Professions is seeking applicants for a full-time tenure-track position at the level of assistant/associate professor of pharmacology. Candidates will be expected to bring or establish an independent extramurally funded research program in their area of interest as well as teach pharmacology to graduate and undergraduate pharmacy students. Teaching experience is preferred. Minimum qualifications required are Ph.D. in pharmacology with 2 years of postdoctoral experience. A pharmacy background is desirable. Applicants should send curriculum vitae, including relevant reprints and names of three references, to the following address by 15 March 1989: **Dr. Norman R. Boisse, Search Committee Chairman, Section of Pharmacology, Mugar Hall, Northeastern University, 360 Huntington Avenue, Boston, MA 02115.** Northeastern is an Equal Opportunity/Affirmative Action Educational Institution and Employer.

TWO Ph.D. STAFF POSITIONS available for a human geneticist, any discipline, and a molecular cytogeneticist. Appointee will develop independent research programs and provide technical and administrative support for the Human Genetic Mutant Cell Repository. Development funds and joint medical school appointments are available. Newly constructed laboratory space and technical assistance will be provided. Salary commensurate with qualifications. Please send curriculum vitae and names of three references to: **Dr. Gerard J. McGarrity, President, Coriell Institute for Medical Research, Copewood Street, Camden, NJ 08103.** Affirmative Action/Equal Opportunity Employer.

PLANT PATHOLOGIST OR ASSOCIATE PLANT PATHOLOGIST

Position available immediately at the International Rice Research Institute (IRRI), Philippines, for a virologist to become part of an interdisciplinary team focusing on rice varietal improvement and integrated pest management. The person selected will conduct basic and applied research on rice viruses, virus-vector relationships, and virus disease management, and develop an innovative disease control program. Background in molecular biology preferred. Qualifications include a Ph.D. degree with specialization in plant viruses and virus diseases. Experience in serology and electron microscopy essential. Salary and benefits will be commensurate with those of similar international agricultural research institutions. Applications will be accepted until 1 March 1989 or until position is filled. Applicants should send curriculum vitae and names of three or more references to: **Dr. Klaus Lampe, Director General, IRRI P.O. Box 933, 1099 Manila, Philippines.**

POSTDOCTORAL FELLOW: HHMI-SAN FRANCISCO-UCSF Immunology-Molecular Neurobiology. A position is available beginning summer 1989 in a laboratory studying neuropeptide receptor function, gene structure and regulation. Applicants should have an M.D./Ph.D. or Ph.D. Experience with recombinant DNA techniques is essential. Send curriculum vitae, statement of interests and three letters of reference to: **Dr. Donald G. Payan, U-426, University of California San Francisco, 3rd and Parnassus, San Francisco, CA 94143.**

POSITIONS OPEN

TRUDEAU INSTITUTE, INC. POSTDOCTORAL ASSOCIATE TO STUDY T CELL-MEDIATED IMMUNITY

A vacancy exists for a postdoctoral fellow interested in studying immunity to tumor and histocompatibility antigens. Current studies deal with various aspects of T cell-mediated rejection of tumors and allografts. The opportunity to study T cell-mediated immunity to bacterial infection also exists. Applicants should have basic training in immunobiology. Starting salary will be commensurate with experience and includes liberal fringe benefits. Subsidized institute housing is available.

The Trudeau Institute is a private, not-for-profit, basic medical research institution located on the shore of Saranac Lake and near Lake Placid, New York.

Send curriculum vitae and names of three references to:

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

POSTDOCTORAL ASSOCIATE to perform open chest surgical procedures on anesthetized pigs, isolated perfusion techniques, and microdissection and cannulation of small coronary arterioles. Conduct in vitro experiments on cannulated arterioles using videomicroscopic equipment including micrometer, timer, monitor, pressure transducers, temperature and chart recorders, perfusion systems and computer. Calibrate equipment. Construct micropipettes using micropipette puller and microforge. Collect and analyze experimental data using various computer programs; present results at scientific meetings. Design new experimental protocols and studies and author scientific manuscripts. Requires Ph.D. in microcirculatory physiology. \$19,440 annually. Apply at: **The Texas Employment Commission, Bryan, Texas,** or send résumé to: **The Texas Employment Commission, TEC Building, Austin, TX 78778, J.O. # 5424112.** Ad paid by an Equal Employment Opportunity Employer.

POSTDOCTORAL FELLOW POSITIONS BIOCHEMISTRY AND GENETICS OF PROTEIN TRANSPORT. Positions are available to examine the molecular genetics of protein and ribonuclear protein transport across organelle membranes in yeast. Studies will focus on in vitro transport methods in conjunction with available genetic and immunological probes to define structure function relationships of the transport apparatus within the nuclear envelope and mitochondrial membranes. Send curriculum vitae or call: **214-688-2120, Dr. Michael G. Douglas, Department of Biochemistry, UT Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75235-9038.** An Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP—NIH/NRSA position available for recent Ph.D. with background in organic, organometallic or medicinal chemistry with interest in the preparation of structurally diverse pharmaceuticals and receptor ligands for positron emission tomography (PET) imaging studies; the development of novel chemical reaction methodology for incorporation of halogens into pharmaceutical substrates. Expertise in total synthesis and analytical instrumentation an asset. U.S. citizenship or permanent resident status required. Send résumé and names of three references to: **Dr. John M. Gerdes, Research Medicine/Radiation Biophysics Division, Lawrence Berkeley Laboratory, M.S. 55-121, 1 Cyclotron Road, Berkeley, CA 94720.** An Affirmative Action/Equal Opportunity Employer, M/F/H.

POSTDOCTORAL FELLOWSHIP. Postdoctoral fellowship available immediately for an individual to undertake research with a project investigating the structure and regulation of human glutamate dehydrogenase and its involvement in neurodegenerative disorders. Potential candidates require a strong background in the field of protein purification and biochemistry and/or gene cloning. Salary on the scale of \$18,000 to \$24,000 per annum plus benefits commensurate with qualifications. Location: New York City. Applications, including curriculum vitae, should be sent to: **Dr. Andrew Plaitakis, Neurology Department, Box 1137, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574.** Telephone: 212-241-7310. An Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL FELLOW. Research position available for M.D. or Ph.D. to study respiratory diseases in one of two areas: control of breathing or connective tissue of the lung and pulmonary circulation. Respiratory control studies involve interaction of control of breathing with the cerebral circulation, brain tissue hypoxia, neurotransmitters, and sleep. Connective tissue studies involve biochemical and molecular biology studies of the regulation of connective tissue metabolism in hypertensive pulmonary arteries and vascular cells. Send curriculum vitae, statement of research interests and career goals to: **David J. Riley, M.D., or Norman H. Edelman, M.D., Pulmonary and Critical Care Division, Department of Medicine, University of Medicine and Dentistry of New Jersey—Robert Wood Johnson Medical School, CN 19, New Brunswick, NJ 08903-0019.** The UMDNJ is an Affirmative Action/Equal Employment Opportunity Employer M/F/H/V.

POSTDOCTORAL NEUROBIOLOGIST to join NIH-funded investigation into the function, distribution and regulation of ion channels in vertebrate neuronal and cardiac cells using patch clamp techniques. The laboratory is located in Newport, on the central Oregon coast. Send curriculum vitae, names of three references and a description of experience and career goals by 28 February 1989 to: **Dr. Donald T. Campbell, Hatfield Marine Science Center, Oregon State University, Newport, OR 97365.** Telephone: 503-867-3011. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available for multidisciplinary studies concerning (i) structure, function, and regulation of expression of neuronal nicotinic acetylcholine receptors, or (ii) second messenger signaling, protein phosphorylation, and gene expression in neuronal differentiation. Investigations are to encompass biochemical, immunological, pharmacological, and molecular genetic approaches with model cell culture systems in a unique and dynamic institution. Send curriculum vitae, names and addresses of three references and a brief statement of research experience and objectives to: **R. J. Lukas, Division of Neurobiology, Barrow Neurological Institute, 350 West Thomas Road, Phoenix, AZ 85013.** Equal Opportunity Employer.

POSTDOCTORAL POSITION to investigate the biochemistry and genetics of antibiotic production by *Streptomyces* and related bacteria with the aim of unraveling novel enzymology and producing new drugs. Experience with enzyme purification and protein biochemistry required, and recombinant DNA methods desirable. Available after 1 March 1989 for a period of 2 years. Salary: \$20,000 to \$22,000 per year depending on qualifications. Apply to: **Professor C. R. Hutchinson, University of Wisconsin, 425 North Charter Street, Madison, WI 53706.** Telephone: 608-262-7582 with résumé and two references.

POSTDOCTORAL POSITION available immediately to study the regulation of heat shock proteins in mammalian postimplantation embryogenesis. Applicant should have a Ph.D. with a strong background in molecular biology. Send curriculum vitae, description of current and past research and names of at least two references to: **Dr. Phillip E. Mirkes, Department of Pediatrics, RD-20, University of Washington, Seattle, WA 98195.**

POSTDOCTORAL POSITION available 1 July 1989 to join group using molecular and immunochemical approaches to study synapse formation in vivo and in vitro [see *Soc. Neurosci. Abstracts*, 254-13/254-14 (1988)]. Experience in tissue culture and/or immunology desirable. Send curriculum vitae and three letters of reference to: **Dr. James W. Gurd, Scarborough Campus, University of Toronto, West Hill, Ontario M1C 1A4, Canada.**

POSTDOCTORAL POSITION and technical position available for 2 years to study population genetics of spiny lobster and finfish. Molecular biology training and experience with mtDNA methods are assets. Send curriculum vitae and names of references to: **Dr. Patrick J. Walsh, Division of Biology and Living Resources, Rosenstiel School of Marine and Atmospheric Science, University of Miami, 4600 Rickenbacker Causeway, Miami, FL 33149.**

POSITIONS OPEN

POSTDOCTORAL POSITION available to study site-specific delivery of polymer bound drugs. Experience in synthetic polymer chemistry and/or biochemistry is desirable. Funding (\$18,000 to \$20,000 per year) is available immediately. Send application letter with experience and research interests, curriculum vitae and three letters of recommendation to: **Dr. Jindrich Kopecek, Center for Controlled Chemical Delivery, Department of Pharmaceuticals, University of Utah, 421 Wakara Way, Suite 318, Salt Lake City, UT 84108.**

POSTDOCTORAL POSITION UNIVERSITY OF COLORADO, BOULDER

Position available immediately for a recent Ph.D. to join an ongoing diversified program investigating the regulation of lung function. Research will emphasize biochemical aspects of lung biology. Applicants should have a strong background in biochemistry or a related discipline. Send curriculum vitae and names of three references to: **Ralph J. Altieri, Ph.D., University of Colorado, School of Pharmacy, Campus Box 297, Boulder, CO 80309-0297.** *The University of Colorado is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION

Postdoctoral fellows/research associates: Positions available now through fall 1989 to study insulin/growth factor-regulated (Ser/Thr) protein kinases and tyrosine kinase substrates. Multidisciplinary program ongoing in well-equipped, newly renovated laboratories. Experience required in protein purification or monoclonal antibody technology. Send curriculum vitae with names of three references, brief description of background and interests to: **J. Avruch, Diabetes Unit, MGH East, Building 149, 13th Street, Charlestown, MA 02129.**

POSTDOCTORAL POSITION available immediately to study EMC virus-induced diabetes. Projects include site directed mutagenesis and construction of recombinant DNA molecules. Preference to recent Ph.D. experienced in cloning. Starting salary: \$24,000. Send curriculum vitae and names of three references to: **George W. Jordan, M.D., Division of Infectious Diseases, University of California, Davis, School of Medicine, 4301 "X" Street, Sacramento, CA 95817.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION IN MOLECULAR VIROLOGY. We are seeking a recent Ph.D. with strong background in molecular biology to join six investigators studying the molecular basis of herpes simplex and varicella zoster virus pathogenesis. Prior experience in virology is not required. Salary range: \$21,000 to \$25,000. Submit curriculum vitae and brief description of prior research to: **Lawrence Stanberry M.D., Ph.D., Infectious Diseases, Children's Hospital Research Foundation (CHRF), University of Cincinnati, Elland and Bethesda Avenues, Cincinnati, OH 45229.** *CHRF is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS available to study DNA transformation in the nematode *C. elegans*, to investigate RNA processing especially focusing on mechanisms of both cis- and trans-splicing, or to study the role of cellular growth factors in development. The work is supported by NIH funding and will be carried out in the Development Biology Laboratory at Synergen, Inc. Background in molecular biology, genetics, or biochemistry required. Please send curriculum vitae, bibliography and names of references to: **Dr. David Hirsh, Synergen, Inc., 1885 33rd Street, Boulder, CO 80301.**

POSTDOCTORAL POSITIONS

are available to work on the molecular biology of adrenergic receptors: Cloning, expression, gene structure, site-directed mutagenesis. Applicants should have a strong background in recombinant DNA technology. Send curriculum vitae and two to three letters of reference to:

Dr. Robert J. Lefkowitz and Dr. Marc G. Caron
Howard Hughes Medical Institute
Box 3821
Department of Medicine
Duke University Medical Center
Durham, NC 27710

MONOCLONAL ANTIBODY DEVELOPMENT

Research Scientist to establish new laboratory

Affymax Research Institute is a new venture in therapeutic drug discovery based on organic chemistry and advanced immunological science with participation of leading academic and industrial scientists.

Affymax seeks a person with extensive knowledge and experience in monoclonal antibody production with the ability to establish a laboratory and produce, independently, purified MAbs to a wide range of haptened immunogens and to develop related new methodologies including anti-idiotypes.

Skill requirements include immunization techniques, cell culture, fusion, hybridoma screening, antibody purification and characterization. Experience with *in-vitro* techniques is desirable.

A graduate degree in immunology, cell biology or biochemistry is desired. A bachelor's degree with extensive experience will be considered.

Attractive employment conditions in a new, first class facility make this an outstanding opportunity.

Send Resume To:

Chief Scientist

Affymax Research Institute

3180 Porter Drive
Palo Alto, California 94304

HIGH TECHNOLOGY WITH AN INTERNATIONAL FLAIR

As one of the largest oil-producing companies in the free-world, Aramco can provide you with state-of-the-art equipment in an innovative technological environment, and also with an exciting lifestyle in Saudi Arabia.

SENIOR SCIENTIST

Requires a BS or advanced degree in Chemistry and 9 years experience in oilfield related geochemistry problem solving. Will be responsible for analytical methods development, testing/evaluation and training. Hands-on experience in mineralogical work by X-ray diffraction/X-ray fluorescence spectrometry and a working knowledge of Scanning Electron Microscopy required.

RESEARCH SCIENTIST

Requires a BS or advanced degree in Chemistry or Corrosion Engineering with 9 years experience utilizing high pressure autoclave systems in the area of corrosion testing. Responsibilities will include routine high pressure testing of treatment and oilfield chemicals (corrosion inhibitors and demulsifiers, coating and associated materials) and preparation of materials including pre and post evaluation of test results.

For confidential consideration, please send your resume to: **ASC, Employment Dept. 06E-010-9, P.O. Box 4530, Houston, Texas 77210-4530.**

ARAMCO

POSITIONS OPEN

POSTDOCTORAL POSITIONS MOLECULAR BIOLOGY, VIROLOGY, IMMUNOLOGY

Postdoctoral positions (three) are available for persons to participate in multidisciplinary experimental studies of Simian Immunodeficiency Virus expression relative to: (i) mechanisms of pathogenesis and development of effective immunoprophylaxis, (ii) evaluation of antiviral drugs in vitro and in vivo, and (iii) identification of humoral and cell-mediated immune responses to SIV infection. Please send curriculum vitae, a summary of research interests, and the names of three references to: **Drs. Michael Murphey-Corb, Kenneth Soike, or Louis Martin, respectively, Delta Regional Primate Research Center, Three Rivers Road, Covington, LA 70433.**

TWO POSTDOCTORAL POSITIONS are available. (i) Protein chemist with experience in immunchemistry or protein modification chemistry to investigate monoclonal antibody-photosensitizer conjugates as potential agents of cancer photochemotherapy. Familiarity with cell biology and photobiology highly desirable. (ii) Biochemist/cell biologist to investigate the biochemical mechanisms of photosensitized damage to mitochondria of carcinoma cells. Experience in mitochondrial function studies desirable. Send curriculum vitae to: **Dr. T. Hasan, Wellman Laboratories of Photomedicine, Harvard Medical School, Massachusetts General Hospital, Boston, MA 02114. Telephone: 617-726-6996.**

POSTDOCTORAL/RESEARCH ASSISTANT MOLECULAR VIROLOGY—ST. LOUIS UNIVERSITY MEDICAL SCHOOL

Research on functional protein domains of immunodeficiency virus, adenovirus, and papillomaviruses. Send curriculum vitae and names of three references to: **Dr. Maurice Green, Chairman, Institute for Molecular Virology, St. Louis University Medical School, 3681 Park Avenue, St. Louis, MO 63110. An Equal Opportunity Employer/M/F/V/H.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

A position is available at the level of postdoctoral research associate to plan and carry out research to test for presence of adenosine triphosphate (ATP) and adenosine (ADO) receptors in skin microcirculation, localize them and determine their physiologic role; investigate influence of ATP and ADO on neurogenic and myogenic control of vascular bed in skin; determine influence of ATP and ADO on angiogenesis. Research tools: microsurgical techniques for preparation of skin microcirculation and development of suitable chambers for "hamster skin fold window preparation" (model); bioengineering methods applicable to studies of microcirculation; knowledge of various microscopic techniques; study of modulator-receptor/modulator-neurotransmitter interactions. Other duties: participate in teaching program. The annual salary will be \$18,900. Applicants with an M.D. degree with 1 year of experience send curriculum vitae and the names of three references to: **Mr. Jack Hilzheim, State of Tennessee, Department of Employment Security, 1309 Poplar Avenue, Memphis, TN 38104. An Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.**

POSTDOCTORAL RESEARCH ASSOCIATE position is available to study the acute and chronic aspects of the negative effect of alcohol on antihypertensive therapy. Studies will involve hemodynamic and electrophysiologic measurements in chronically instrumented conscious rats as well as central administration of drugs to investigate the role of central sympathetic pathways in the interaction. Candidates must have a Ph.D., M.D., D.V.M. or equivalent degree. Familiarity with hemodynamic measurements is desirable. Send curriculum vitae, description of research experience, and names of three references to: **Dr. Abdel Rahman, Department of Pharmacology, School of Medicine, East Carolina University, Greenville, NC 27858. Federal law requires proper documentation of identity and employability at the time of employment. It is requested that this documentation be included with your application. An Affirmative Action/Equal Employment Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

Position available immediately for up to 5 years to join collaborative studies of neural mechanisms of motion perception in cats. Techniques include visual psychophysics, neurotoxic cortical lesions, optic nerve block, histology, single unit recordings and monitoring of eye position with magnetic search coils. Ph.D. with training in visual neurophysiology, anatomy, or related areas is required. Annual salary commensurate with experience. Send curriculum vitae to: **Tatiana Pasternak, Ph.D., Center for Visual Science, University of Rochester, Rochester, NY 14627. An Equal Opportunity Employer M/F.**

POSTDOCTORAL RESEARCH ASSOCIATE

Position available immediately at Stanford University Medical Center to investigate mechanisms of acute lung injury and strategies for prevention. Laboratory investigates lung injury utilizing small animal models, cell culture techniques, neutrophil signal transduction pathway biochemistry, patch-clamping, and receptor interaction studies. This position will have some supervisory responsibility. Approximate annual salary is \$32,000. Please send curriculum vitae, names of three references, and brief description of interests, experience, and mastered investigative techniques to: **Thomas A. Raffin, M.D., Acting Chief, Division of Respiratory Medicine, Room C-356, Stanford, CA 94305.**

POSTDOCTORAL RESEARCH FELLOW/ASSOCIATE

Position is available for research on biochemistry of glutathione metabolism and functions involving enzymology, molecular biology, structural studies, and chemical synthesis. Applicant should have Ph.D. or equivalent training. Send curriculum vitae, list of publications, and names of two references to: **Dr. Alton Meister, Department of Biochemistry, Cornell University Medical College, 1300 York Avenue, New York, NY 10021. Affirmative Action/Equal Opportunity Employer.**

TECHNICAL STAFF POSITIONS

Accelerator Mass Spectrometry Facility

Several technical positions available to support new NSF-sponsored National AMS facility for ocean sciences within Geology and Geophysics Department at the institution.

Staff Chemist: PhD in Chemistry; experience in radiocarbon research or carbon-based chemical systems to design and operate high throughput sample preparation lab for producing milligram-carbon sputter targets. Multiple preparation lines will be developed using a high degree of automation to ensure high precision; comparative studies of sample preparation methods are anticipated. Evaluation of AMS precision and accuracy will be carried out with other AMS and radiocarbon labs. Available May 1, 1989.

Staff Engineer/Physicist: PhD or MS in Physics or Engineering; experience in computer and microprocessor control of accelerators, ion sources, test instruments and robotics required to design and manage hardware and software systems for (1) automated sample preparation lab, and (2) automated control systems for the AMS and its associated data acquisition, analysis and archiving. Available May 1, 1989.

Accelerator Engineer: BS or MS in Electrical or Mechanical Engineering or Physics; experience in electronics, vacuum technology, high voltage equipment required with computer control/robotics experience desirable, to operate and maintain 3 MV tandem accelerator, 2 automated ion sources and vacuum systems, and supervise lab utilities. Will participate in testing and installing of system and assist AMS staff in design and construction of fully automated sample preparation lab. Available July 1, 1989.

All inquiries with resume should be sent to **Personnel Manager, Box 54P, Woods Hole.**



WOODS HOLE OCEANOGRAPHIC INSTITUTION

Woods Hole, MA 02543
An equal opportunity employer M/F/H/V

Assistant Scientist

Parke-Davis Pharmaceutical Research Division, Warner-Lambert Company, has an immediate opening for an Assistant Scientist in the Arthritis/Inflammation Section of the Pharmacology Department at their Pharmaceutical Research Facility in Ann Arbor, Michigan.

Responsibilities of the position will be to evaluate compounds for effects on human leukocyte functions and apply biochemical techniques to characterize compound mechanisms.

The successful candidate will have:

- BS/MS in biological sciences, with a background in cell biology and biochemistry
- 2-4 years' experience with tissue culture techniques highly desirable
- Excellent written and oral communications skills
- Outstanding ability to work as part of a team effort

Employment will be at our modern facilities adjacent to The University of Michigan campus. We offer excellent benefits. Interested, qualified applicants should send curriculum vitae and salary requirements, in confidence to **Ms. S. Hultquist, Human Resources Representative, Parke-Davis, 2800 Plymouth Road, Ann Arbor, MI 48105.**

PARKE-DAVIS

DIVISION OF WARNER-LAMBERT COMPANY

"Equal Opportunity in Action"

Assistant/Associate Director of Clinical Research

Immunex Corporation, a Seattle-based biotechnology corporation in the forefront of research and development in immune regulation, hematopoiesis and wound healing, currently has an immediate opportunity for an Assistant/Associate Director of Clinical Research.

The primary responsibilities for this position will include managing and interpreting clinical trials for FDA submission, overseeing data collection activities; monitoring medical questions; and interaction with research and development, manufacturing, regulatory affairs, and physician investigators.

The qualified applicant will have a PhD or MD and 2-5 years of clinical research experience. Experience with biologics is advantageous.

Immunex offers a challenging and rewarding work environment, as well as an excellent compensation and benefits package. For consideration, please submit resume together with the names of three references to: **Immunex Corporation, Human Resources Director**, Dept. NYT, 51 University Street, Seattle, WA 98101. EOE.

IMMUNEX

Cytogeneticist

BOEHRINGER INGELHEIM PHARMACEUTICALS, INC., a major researcher, developer, manufacturer and marketer of prescription and over-the-counter drugs, is currently seeking a Cytogeneticist for the Department of Toxicology and Safety Assessment. This position is located at our Research and Development facility in **Danbury, Connecticut**.

This position requires a Ph.D. with a minimum of 5 years experience in Cytogenetics including the following areas:

- Micronucleus test in vivo and in vitro
- Metaphase analysis in vivo and in vitro
- Sister-chromatid exchange in vivo and in vitro
- Cell culture techniques
- Use of various techniques to investigate mechanisms of action

The successful candidate will test pharmaceutical products for their clastogenic potential in vivo and in vitro.

BOEHRINGER INGELHEIM PHARMACEUTICALS, INC., offers a highly competitive compensation and benefits package, relocation assistance, and excellent work environment and the opportunity to have your contributions recognized.

Please send your resume and salary requirements to: Dept. JC-IS-907, BOEHRINGER INGELHEIM PHARMACEUTICALS, INC., 90 East Ridge, P.O. Box 368, Ridgefield, CT 06877. We are an equal opportunity employer m/f/h/v.



**Boehringer
Ingelheim**

MOLECULAR BIOLOGIST AND BIOCHEMIST

The BOC Group, an innovative world leader in health care products and industrial and specialty gases, has two challenging career opportunities at our state-of-the-art central research laboratories of the BOC Group located at Murray Hill, New Jersey.

MOLECULAR BIOLOGIST

The selected candidate will be research oriented and have a broad knowledge of biotechnology in the pharmaceutical industry. You will participate in defining a biotechnology program within Health Care R&D, for acute and critical care pharmaceutical agents. Additionally, you will serve as the focal point for external contacts with universities and biotechnology companies. The qualified individual will have a Ph.D. in Molecular Biology with at least three years experience and a knowledge of cloning methods, preferably in the area of expression cloning, gene transfer methods, and site directed mutagenesis.

BIOCHEMIST

The selected candidate will be interested in contributing their expertise to a team of computational and medicinal chemists, pharmacologists and molecular biologists identifying new approaches to acute and critical care pharmaceutical agents. This position requires a Ph.D. and 0-2 years of postdoctoral experience, a knowledge of enzymology and protein characterization and ligand interactions. The successful candidate will have excellent analytical skills and be familiar with radioligand binding techniques, methods of enzyme assay, and chromatographic methods.

BOC offers a challenging, and stimulating scientific research career environment, with the opportunity to interact with scientists from many disciplines. We provide an excellent compensation and benefits package. For prompt, confidential consideration, please forward your resume, with salary history/requirements to Jules DuParc, Employee Relations Mgr:

THE BOC GROUP

Technical Center

Box 101, 100 Mountain Ave, Murray Hill, N.J. 07974
(An Equal Opportunity Employer (M/F/H)).

RESEARCH ASSOCIATES RENAL & CARDIOVASCULAR PHARMACOLOGY

The Squibb Institute for Medical Research is recognized internationally as a leader in the research and development of novel therapeutic agents for the treatment of cardiovascular and infectious diseases. We currently have an exceptional opportunity available for Research Associates to join our Department of Pharmacology.

Qualified candidates will have an MS in Biology or equivalent or a BS with a minimum of 3 years relevant laboratory experience.

You will be part of a team conducting research on the cardiovascular, renal and hormonal actions of atrial natriuretic peptide with a focus on hypertension and congestive heart failure. This involves setting up models in small and large animals, with an emphasis on in vivo measurements of cardiac, vascular and renal function. Responsibilities also include the acquisition and analysis of data using online and offline software.

For confidential consideration, please submit your resume to: **The Squibb Institute For Medical Research, Human Resource Department 013, P.O. Box 4000, Princeton, NJ 08543.** An equal opportunity employer.



SQUIBB

POSITIONS OPEN

POSTDOCTORAL RESEARCH POSITION is available to study the role of the inositol lipid cascade and intracellular pH and Ca^{2+} changes during frog and mouse egg activation and early pattern formation. Techniques to be applied include Tsien's ratio imaging system for fura-2 and BCECF fluorescence, Ca^{2+} -specific microelectrodes, vibrating probe, patch clamp, HPLC and NMR. This appointment will be for 2 to 3 years. Salary: \$22,000 per year. Closing date: 1 March 1989. Please send résumé and names of three references to: **Dr. Richard Nuccitelli, Zoology Department, University of California, Davis, CA 95616.** An Equal Opportunity/Affirmative Action Employer.

PROFESSOR AND CHAIRMAN DEPARTMENT OF MEDICINAL CHEMISTRY UNIVERSITY OF TENNESSEE, MEMPHIS THE HEALTH SCIENCE CENTER COLLEGE OF PHARMACY

The University of Tennessee College of Pharmacy is seeking outstanding candidates for the position of Professor and Chair of the Department of Medicinal Chemistry. Senior and accomplished scientists with extramurally funded research programs in the pharmaceutical or biomedical sciences are invited to register their candidacy. The Chairperson will be expected to guide the major expansion of the research and research training programs of the Department. Minimum qualifications include an earned doctorate in related discipline, an established research program in the pharmaceutical or biomedical sciences, administrative experience in an academic environment and a demonstrated ability to work collaboratively in a university health science center. Applicants should send a letter of interest along with a copy of their curriculum vitae to: **Michael R. Ryan, Dean, College of Pharmacy, University of Tennessee, Memphis, 874 Union Avenue, Memphis, TN 38163.** The University of Tennessee is an Equal Employment/Affirmative Action Employer. Minorities and women are encouraged to apply.

University of North Carolina at Chapel Hill has an opening for a **RESEARCH ASSISTANT PROFESSOR**. The appointment will be made based on potential for academic excellence and without regard to the disciplinary specialization of the successful applicant. Research interests compatible with one or more of the ongoing programs in marine ecology, geology, chemistry and physics will be sought. The appointment will carry a 9-month salary and utilize office/laboratory space at the Institute in Morehead City. The appointment will be for a 2-year term, renewable once and will be available fall 1989. Applications will be reviewed after 1 March 1989 and will be accepted until the position is filled. Send curriculum vitae, letter describing interests, and names of three references to: **Dr. Dirk Frankenberg, Director, Institute of Marine Sciences, 3407 Arendell Street, Morehead City, NC 28557.** The University of North Carolina at Chapel Hill is an Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE—conduct research on the mechanism of oncogene regulation during differentiation of F9 teratocarcinoma cells using molecular biological approaches. Requirements include M.D. or Ph.D. in biochemistry; strong background in independent experimental techniques and methodology including cloning, transfection, Southern and Northern analyses in the area of teratocarcinoma cell lines; thorough knowledge of nuclear protooncogene expression and molecular basis for retinoid action, Salary \$22,000, 40 hours per week. Respond with résumé only to: **Job Order #9307, Division of Employment Security, Government Center, Boston, MA 02114.**

RESEARCH ASSOCIATE IN CELL AND MOLECULAR BIOLOGY: Position available to study mechanisms of anti-sense RNA inhibition of gene expression in higher eukaryotes. Retroviral vectors are employed to deliver anti-sense constructs targeted to genes of clinical and biological interest. The applicant should have an M.D. or Ph.D. with a background in cell and/or molecular biology. Send curriculum vitae and references to: **Dr. Edward Holmes, Department of Medicine and Biochemistry, Box 3034, Duke Medical Center, Durham, NC 27710.**

POSITIONS OPEN

MASSACHUSETTS GENERAL HOSPITAL HARVARD MEDICAL SCHOOL PROFESSOR OF GENETICS

Massachusetts General Hospital and Harvard Medical School are seeking a Professor of Genetics in the Department of Molecular Biology at MGH. The successful candidate will be expected to develop a major research and training program in the molecular genetics of development, and participate in the teaching of medical and graduate students. Candidates should have demonstrated scholarly achievement and promise of the highest order. *Harvard University is committed to increasing representation of women and minority members among its faculty and particularly encourages applications from such candidates.* Candidates should send curriculum vitae and statement of research interests to: **Dr. Howard Goodman, Chief, Molecular Biology, Massachusetts General Hospital, Fruit Street, Boston, MA 02114.**

Harvard Medical School and Massachusetts General Hospital are Affirmative Action/Equal Opportunity Employers.

RESEARCH ASSOCIATE position available immediately to investigate drug mechanisms influencing the functional and structural properties of Ca^{2+} channel and pump proteins of cardiac and vascular smooth muscle. A Ph.D. in biochemistry, molecular pharmacology, and/or toxicology, or neurobiology essential. Experience in receptor isolation, radioligand binding, ion flux measurements, and HPLC preferred. Initial appointment for 2 years, extension possible. Send curriculum vitae and names and addresses of three references to: **Dr. Isaac N. Pessah, Department of Veterinary Pharmacology and Toxicology, University of California, Davis, CA 95616.**

RESEARCH POSTDOCTORAL FELLOWSHIP. Biochemical and molecular mechanisms of hormone (angiotensin) actions in heart. Receptor-G protein interactions, second messenger generation (Ca^{2+} and phospholipids), protein synthesis. Available: June 1989. Salary: PGY basis. Contact: **Kenneth M. Baker, M.D., Weis Center for Research, Geisinger Clinic, North Academy Avenue, Danville, PA 17822-2611.**

RESEARCH PSYCHOLOGIST GS-14 \$46,679 to \$60,683 per annum

The Walter Reed Army Institute of Research is currently accepting applications for a research psychologist to create, design and conduct, within broad guidelines, a research program on the effects of radiofrequency radiation on the behavior and physiologic function on intact, living experimental animals.

Interested applicants may submit applications (SF-171) to:

**Walter Reed Army Medical Center
Civilian Personnel Office
Building 11, Room 2-89
Washington, DC 20307-5001
Attention: Ms. Edna Gibson
Telephone: 202-576-2725**

Equal Opportunity Employer.

SCIENTIST FOR INTERMEDIATE VOLTAGE EM FACILITY

The Lawrence Berkeley Laboratory, in association with the University of California, Berkeley, is establishing a West Coast Facility for Intermediate Voltage Electron Microscopy. Special features of this facility will include a 400-kV EM with high resolution, high tilt, and cryo stage capabilities. The facility will serve two core projects and collaborative and service projects. To maintain the day-to-day operation of this facility, we are looking for an independent, experienced scientist with a Ph.D. degree in biology. The successful candidate will have an understanding of electron optics, substantial practical experience in TEM, and knowledge of accessory techniques such as cryo-EM and image analysis. He/she will advise users on the proper operation of the instrument and conduct research on new applications of IVEM technology. Applicants should send their curriculum vitae, and three letters of reference to: **Dr. Manfred Schliwa, c/o Ron Lowder, LBL (Refer to JOB # A/5063) Employment, Building 90-1012, #1 Cyclotron Road, Berkeley, CA 94720.** An Equal Opportunity Employer, M/F/H.

POSITIONS OPEN

RESEARCH SCIENTIST—The Department of Surgery at North Shore University Hospital invites applications for an anticipated full-time research position in the Division of Basic Science Research. Candidates conducting basic research in Adult Respiratory Distress Syndrome or cardiac calcium metabolism are encouraged to apply, although other fields of interest will be considered. Applicants completing postdoctoral training ready to conduct independent research would be strongly considered. Candidates will be expected to develop an active research program with the potential of attracting extramural funding. Ph.D. and/or M.D. degree with a minimum of 3 to 5 years of postdoctoral experience are required. Please respond by providing a brief statement of research interests and plans, curriculum vitae and bibliography, and the names of three references to: **Dr. Saul R. Powell, North Shore University Hospital, Boas-Marks Biomedical Research Building, 350 Community Drive, Manhasset, NY 11030.** Equal Opportunity Employer M/F.

SENIOR POSTDOCTORAL RESEARCH ASSOCIATE

The responsibility includes operating and maintaining the Tissue Culture Laboratory, participating in ongoing research projects on arachidonic acid metabolism, and providing expertise in cell culture techniques to other investigators. Extensive experience in cell culture and doctoral degree in biological sciences are required. Annual salary is \$30,000. This position will be in the Pennington Biomedical Research Center, a major new facility in the Louisiana State University system with the mission of improving human health through research in nutrition and preventive medicine. When responding to this ad, please reference #8741201020. Please send curriculum vitae and three letters of reference directly to: **Dr. George Bray, Pennington Biomedical Research Center, 6400 Perkins Road, Baton Rouge, LA 70808-4124.** LSU is an Affirmative Action Employer.

STATISTICIAN/DATA ANALYST

The Smithsonian Tropical Research Institute anticipates an opening in early 1989. M.S. or equivalent experience. Good working knowledge of repeated measures, multivariate, and time series analyses. Background in ecology, microcomputers, Dbase, Systat, BMDP, and graphics. Contracted appointment without benefits starting at \$20,000 per annum. Possible continuations until 1992. Send application, curriculum vitae, and names of three references by 28 February 1989 to: **Smithsonian Tropical Research Institute, Attention: Dr. B. Keller, APO Miami 34002-0011.**

UNIVERSITY OF COLORADO HEALTH SCIENCES CENTER STRUCTURAL BIOLOGY

The Department of Cellular and Structural Biology seeks candidates for a tenure-track **FACULTY POSITION** in structural biology and anatomy.

The position offers excellent research facilities, especially state-of-the-art equipment for computed imaging of macroscopic and microscopic structures. These resources present unique opportunities for individuals familiar with human anatomy and computer approaches to imaging for research and teaching.

Applicants should have an M.D. and/or Ph.D. degree with a strong academic background including evidence of research contributions in molecular structure, cellular or developmental biology, or neurobiology. Contributions in biodynamics, artificial intelligence or other areas of modern research also will be considered. Candidates who are interested in or have experience in teaching human anatomy are particularly encouraged to apply. Depending on qualifications, ranks and salary are negotiable.

Interested individuals should submit a complete curriculum vitae including a one-page description of research plans and the names of three or more referees familiar with their work. Applications will be reviewed commencing 15 February 1989, and should be sent to:

**David G. Whitlock, M.D., Ph.D.
Chairman: Search Committee for Structural Biology
Department of Cellular and Structural Biology
University of Colorado School of Medicine
4200 East Ninth Avenue, B-111
Denver, CO 80262**

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

RESEARCH SCIENTIST PHARMACOLOGY

Amgen is a dynamic, growing organization producing human therapeutic products through recombinant DNA technology. Our leadership in the development of Erythropoietin and Granulocyte Colony Stimulating Factor has placed us at the leading edge of the biotechnology industry. Our continued growth has created an immediate opportunity for a Research Scientist in our Pharmacology Group.

Applicants must possess a Ph.D. in Pharmacology or a related discipline with a strong background in whole animal research and experience in one or more of the following areas: inflammation, wound repair, immunopharmacology, hematology and oncology. Proficiency in statistical analysis of data is essential, and postdoctoral training is highly desirable.

Amgen offers a competitive compensation and benefits package, including equity participation, as well as a challenging and stimulating research environment. Our location one hour northwest of Los Angeles offers the best in Southern California living. Qualified applicants should direct a resume and a list of 3 references, in confidence, to:

Recruitment, Dept. #372

AMGEN

1900 Oak Terrace Lane
Thousand Oaks
CA 91320

Equal
Opportunity
Employer

AMGEN

Research Scientist/ Peptide Chemist

Triton Biosciences Inc., a subsidiary of Shell Oil Company, is a fully integrated pharmaceutical and diagnostics company focused on product development opportunities in the area of cancer and other life-threatening diseases.

The successful candidate will manage a state-of-the-art peptide chemistry laboratory. Specific responsibilities include solid phase peptide synthesis using t-boc and f-moc chemistry, rapid synthesis technology, peptide structure-function studies, analog development, and epitope mapping for several R&D programs in the cytokine and oncogene area. The position involves both active scientific collaboration and a service component. Candidates should have a PhD in peptide chemistry, 4+ years experience, and good organizational and communication skills.

Triton is located in the San Francisco Bay Area and offers competitive salaries and benefits, including relocation assistance. For consideration, send C.V. with salary history and references to: Triton Biosciences Inc., Box PH, 1501 Harbor Bay Parkway, Alameda, CA 94501. An Equal Opportunity Employer.



Triton Biosciences Inc.

Scientist

Division of Surgical Research The Hospital for Sick Children

A Scientist position is currently open in the Division of Surgical Research in the Research Institute of The Hospital for Sick Children. The research focus in this Division is transplantation physiology and immunology. The Research Institute of The Hospital for Sick Children is the largest paediatric research institute in Canada. The Institute is based on a firm and secured long-term endowment. Currently, the Institute has 18 research divisions with over 150 principal investigators and 200 trainees supported by a full range of excellent research services. The existing research programmes are strong, innovative and collaborative.

Applicants should have a Ph.D. or M.D. Degree with post-doctoral research training in one of the following areas: transplantation immunology, pharmacology or biochemistry; tumor immunology. The successful

candidate will be expected to establish a strong independent programme and will be encouraged to interact with other basic or clinician scientists in the Research Institute. Excellent office and laboratory space and equipment are available in the Division of Surgical Research. Salary, rank and start-up funds are negotiable. The successful candidate will be appointed to the Department of Surgery of the University of Toronto.

Please send a curriculum vitae and the names of three references should be submitted, quoting file #C160A and post-marked no later than March 15, 1989, to: Cho Y. Pang, Ph.D., Chairman of the Search Committee, Division of Surgical Research, The Hospital for Sick Children, 555 University Avenue, Toronto, Ontario, Canada M5G 1X8



THE HOSPITAL
FOR SICK CHILDREN

POSITIONS OPEN

VETERINARY MICROBIOLOGIST DIAGNOSTIC LABORATORY

Assistant director of multi-functional veterinary bacteriology and mycology laboratory. Share with director technical and operational responsibilities; must develop strong individual research program in bacteriology or infectious diseases of animals commensurate with mission of the Diagnostic Laboratory. D.V.M. and/or Ph.D. in microbiology with appropriate experience and knowledge in clinical microbiology and infectious diseases. Preference for emphasis, interest in anaerobic and enteric bacteriology, mycoplasma, or clinical mycology. Title and salary commensurate with qualifications and experience. Tenure-track appointment available. Submit curriculum vitae to: Sang Shin, D.V.M., Chairman Search Committee, Diagnostic Laboratory, College of Veterinary Medicine, Cornell University, Ithaca, NY 14853-6401.

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

VIROLOGIST

Technician performing disinfectant testing and tissue culture cytotoxicity. Experience with HSV, Polio, Influenza, and Rhino viruses helpful. Salary: \$18,000 to \$24,000 per year. Gibraltar Labs, 122 Fairfield Road, Fairfield, NJ 07006.

ASSISTANTSHIPS

ASSISTANTSHIPS GRADUATE PROGRAM IN NEUROSCIENCE

The Neuroscience Program at University Hospital at The Milton S. Hershey Medical Center of the Pennsylvania State University has assistantships available in August 1989. This interdepartmental program is designed to confer a Ph.D. degree with a major in neuroscience. Participating faculty have established research programs in molecular biology of the nervous system, neurophysiology, neuroendocrinology, behavioral science, neuropharmacology, neurovirology, and cerebral blood flow and metabolism. Interested candidates are invited to apply to: Dr. Robert B. Page, Director, Neuroscience Program, P.O. Box 850, Hershey, PA 17033. *An Equal Opportunity/Affirmative Action Employer.*

Minimum 4-year GRADUATE RESEARCH AND/OR TEACHING ASSISTANTSHIPS in plant biology are available for highly qualified students seeking Ph.D. degree starting September 1989. Specific program specializations include, but are not restricted to, photosynthesis; cell and molecular biology, developmental anatomy and morphology; physiological, population and community ecology; systematics and evolution; weed science.

For information, contact: Dr. Alan Stemler, Botany Graduate Group Admissions Chair, Botany Department, University of California-Davis, Davis, CA 95616, or call: 916-752-7094, Graduate Group Admissions Office.

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

COURSES

MARICULTURE: CULTURE OF MARINE INVERTEBRATES FOR RESEARCH PURPOSES. Designed to teach the basics of mariculture to advanced students, this course is scheduled for 21-27 May 1989. Tuition: \$850 (includes room and board). Application deadline is 1 April 1989. For further information, contact: Admissions Coordinator, Marine Biological Laboratory, Woods Hole, MA 02543. Telephone: 508-548-3705, extension 216.

AUTORADIOGRAPHY IN ELECTRON MICROSCOPY

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Research Scientists

IMMUNOLOGY AND MOLECULAR BIOLOGY

Bionetics Research Institute conducts cancer research and product development as part of the Pharma Division of Akzo, NV, an organization operating in 50 countries worldwide.

IMMUNOLOGY — We are currently seeking an experienced Research Scientist to develop and characterize new murine monoclonal antibodies for use in commercial immunoassay development and supervise the hybridoma laboratory staff of four. Duties will be performed in cooperation with the animal resources and product development laboratories. This position will report to the Director, Diagnostic Product Research Laboratory. The successful candidate will have a Ph.D. in immunology or related discipline and several years' postdoctoral monoclonal antibody research with publications.

MOLECULAR BIOLOGY — We are also seeking a Research Scientist to direct a small technical staff in basic research for diagnostic test development. Antigens to be targeted include human retroviruses. The successful candidate will have a Ph.D. in molecular biology or related discipline and expertise in the generation of cDNA libraries; manipulation of plasmids and vectors; expression in prokaryotic and eukaryotic cells; assay development; DNA sequencing, as well as proven writing skills through publications.

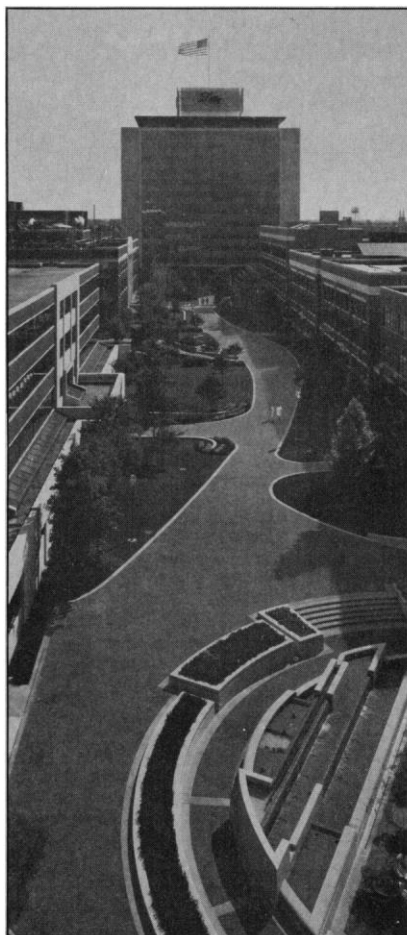
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BIONETICS RESEARCH INSTITUTE
1330-A Piccard Drive, Dept. S-127
Rockville, MD 20850

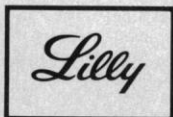
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BS/MS INHALATION TOXICOLOGIST

Toxicology Division



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- Experience in conducting inhalation toxicology studies with animal models.
- Experience in pulmonary physiology is desirable, but not essential.
- Excellent organizational and communication skills.

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For prompt consideration, please forward your *resumé* to:

Dr. Ronald K. Wolff (AIT-1)
Eli Lilly and Company
P.O. Box 708
Greenfield, IN 46140

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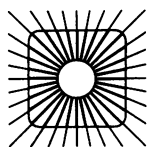
DIRECTOR OF BASIC RESEARCH

Major responsibilities entail supervision of research in pharmacology, endocrinology, organic chemistry and virology. The ideal candidate will be a senior scientist with 8-12 years' experience in the pharmaceutical industry in the design and management of pharmacological research programs.

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Leading our Pharmacology/Physiology Department, major responsibilities entail direction of research in therapeutic protein delivery, pharmacokinetics and toxicology. The ideal candidate will have significant pharmaceutical experience in one or more of the following areas: animal models of disease, pharmacokinetics, toxicology and immunoassay.

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Career Opportunity In Physical Oceanography

Battelle, Pacific Northwest Laboratories has an opening in its Marine Science Laboratory at Sequim, Washington, for a Senior Research Scientist-Physical Oceanographer.

The successful candidate will be the lead scientist for physical oceanographic research projects conducted in the Global Change Program. This program involves research in the following areas: air-sea interactions; modeling of mixing and radiative transfer in the surface layer; numerical experiments on convection and thermohaline circulation in the ocean; parameterizations of subgrid-scale processes in 3-dimensional circulation models; coupling coastal ocean-estuarine and upland hydrologic models for studies at regional scales.

A doctor's degree is needed, preferably with strong programming skills, supercomputer experience and program development expertise.

For consideration, submit resumes to: **Anthony F. Gasperino, Battelle, Pacific Northwest Laboratories, P.O. Box 999, Dept. 079, Richland, WA 99352.** U.S. Citizenship Required. An Equal Opportunity Employer.



Battelle

Pacific Northwest Laboratories

COURSES

FLOW CYTOMETRY APPLICATIONS COURSE will be presented at the Los Alamos National Laboratory, Los Alamos, New Mexico, 21 to 26 May 1989. This course will emphasize applications in immunology and cell biology. Course tuition: \$550 (U.S.). For information contact: Mary Cassidy, NRCR, MS M888, Los Alamos National Laboratory, Los Alamos, NM 87545; telephone: 505-667-3914.

SYMPOSIUM

INTERNATIONAL SYMPOSIUM

MacroMolecules, Genes and Computers: Chapter Two is scheduled for 13-18 August 1989 at the White Mountain Conference Center, Waterville Valley, New Hampshire. This International Symposium has been designed to facilitate the exchange of information in the interdisciplinary domain overlapping computer science, mathematics, genetics, medicine, and molecular biology. Session topics will include the fundamental properties of biological systems, the enabling technologies required for their understanding, the practical application of these technologies and the anticipated future challenges within this interdisciplinary domain. Also included will be computer hardware/software workshops and both electronic and traditional poster sessions. The meeting is sponsored by the National Library of Medicine and organized by the Molecular Biology Computer Research Resource of the Dana-Farber Cancer Institute/Harvard School of Public Health. Those interested in attending should contact: Temple Smith, MBCCR—J815, Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115.

WORKSHOP

STRUCTURAL AND CHEMICAL BASIS FOR CELL FUNCTION.

Sponsors: Annenberg Center for Health Sciences, The Research Institute of Scripps Clinic, 25 to 28 April 1989.

A conference designed to create a forum for integrating chemistry, biophysics and cell biology. Poster session available to participants.

Topics: Macromolecular Assemblies, Regulation of Gene Expression, Intracellular Transport, Signal Transduction, Motility, and Cell Surface/Membrane Channels.

Organizing Committee: N. B. Gilula, L. Gerace, J. Hogle, B. Huang, R. Milligan, I. Wilson, N. Unwin.

Invited participants: J. Abelson, Pasadena; D. Agard, San Francisco; C. Akey, England; H. Betz, FRG; H. Bourne, San Francisco; D. Eisenberg, Los Angeles; S. Fuller, FRG; L. Gerace, La Jolla; S. Harrison, Cambridge, MA; T. Hunter, La Jolla; S. H. Kim, Berkeley; M. Kirschner, San Francisco; B. Kretsinger, Charlottesville, VA; T. D. Pollard, Baltimore; D. Rees, Los Angeles; J. Sedat, San Francisco; K. Simons, FRG; J. Spudich, Palo Alto; R. Vallee, Worcester, MA; P. Walter, San Francisco.

Registration information: Registration fee is \$125. It covers the conference, coffee breaks, and reception. For registration forms, poster session forms and additional information: Annenberg Center, 39000 Bob Hope Drive, Rancho Mirage, CA 92270 or call: 800-321-3690 US, 800-621-7322 CA, FAX: 619-773-4513, TELEX: 188979 ANNENBERG CTR.

FELLOWSHIPS

CHARLES A. DANA FOUNDATION FELLOWSHIPS are available at the COLUMBIA-PRESBYTERIAN MEDICAL CENTER

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GRADUATE TRAINING PROGRAM

GRADUATE ASSISTANTSHIPS IN MOLECULAR BIOLOGY AND BIOCHEMISTRY. Several positions are available in the Department of Molecular Biology and Biochemistry, Wesleyan University (Middletown, Connecticut). Research interests of the faculty emphasize regulation of gene expression in embryogenesis and development; protein structure, function and design; DNA replication; yeast genes homologous to protein kinase oncogenes; structure and function of chromosomal proteins; protein-nucleic acid interactions; chemistry of reactions at phosphorus; nuclear magnetic resonance spectroscopy and computer modeling. All students receive tuition remission, good fringe benefits, and dependency allowance if applicable. Opportunities to teach. Write to: Dr. Norma Allowell, Director Graduate Admissions, Department of Molecular Biology and Biochemistry, Wesleyan University, Middletown, CT 06457 or call: 203-347-9411, X2524.

FELLOWSHIPS

GEORGE S. WISE POSTDOCTORAL FELLOWSHIPS

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

The faculty is engaged in such research areas as anatomy, taxonomy and physiology of plants; anatomy, sociobiology and physiology of animals; marine biology; cellular and molecular biology and genetics; lipid and protein research; bioenergetics; neurobiology; immunology; virology; cancer biology; biotechnology and nature preservation.

Application forms can be obtained from: The Dean, The George S. Wise Faculty of Life Sciences, Tel Aviv University, Tel Aviv 69978, Israel. Deadline for applications is 30 May of each year.

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Available immediately for 2 to 3 years, for a qualified M.D. or Ph.D. Sponsored by the Department of Pathology and the Division of Cardiology to study receptor(s) for angiotensin II and other vasoactive hormones. The group provides expertise and state of the art technology in molecular and cell biology. Position could lead to faculty appointment. Experience in receptor biology and biochemistry required. Salary negotiable. Please send curriculum vitae and references to: Ken Bernstein, M.D. or Wayne Alexander, M.D., Room 713 WMB, Emory University, Atlanta, GA 30322. Equal Opportunity/Affirmative Action Employer.

HARVARD SCHOOL OF PUBLIC HEALTH INTERDISCIPLINARY PROGRAMS IN HEALTH POSTDOCTORAL FELLOWSHIPS



The Program in Environmental Health and Public Policy invites applications from promising graduates of advanced degree programs in the natural or social sciences. The program focuses on the scientific and analytical foundations for environmental decisions. In addition to conducting individual research, fellows are encouraged to collaborate with each other and faculty members on projects of mutual interest. Recent group projects have considered approaches for regulation of toxic air pollutants, strategies for environmental monitoring and implications of distributions of susceptibility.

Fellows will be appointed for a term of 1 year starting September 1989. Award may be renewed. Applications deadline: 10 March 1989. Decisions announced in April.

For information write to:

Professor John S. Evans
Attention: Fellowships
Harvard School of Public Health
665 Huntington Avenue
Boston, MA 02115
Telephone: 617-732-1258

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PRE- AND POSTDOCTORAL FELLOWSHIPS.

Opportunities are available through an NIH-sponsored program in the areas of cancer cell/molecular biology, carcinogenesis, biochemistry, endocrinology, virology, pathophysiology of cancer, environmental cancer, and nutrition. Predoctoral students will have the option of enrolling in the departments of Biochemistry, Pathology and Microbiology and Pharmaceutical Sciences. Postdoctoral fellows should forward curriculum vitae, three letters of recommendation, and an expression of research interest. Funding is restricted to U.S. citizens or permanent residents. For complete information write to: Donald Nagel, Ph.D., Eppley Institute for Research in Cancer, University of Nebraska Medical Center, Omaha, NE 68105. Affirmative Action/Equal Opportunity Employer.

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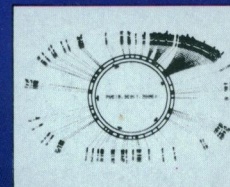
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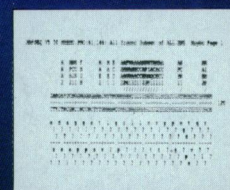
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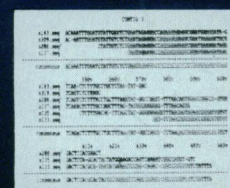
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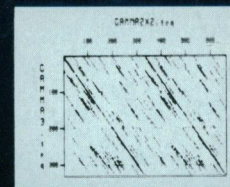
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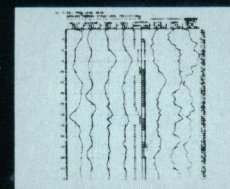
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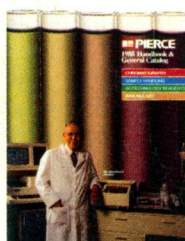
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