

L. Kitching and S. L. Pimm), wetland herpetofaunas (M. P. Simbotwe and G. R. Friend), nectar-feeding birds (H. A. Ford), breeding biology of insectivorous birds (J. C. Z. Woinarski), small mammal succession after fire (B. J. Fox *et al.*), and general community structure (A. V. Milewski and R. M. Cowling). These papers provide a good sampling of the state of the art of intercontinental comparison.

The state of the art is, unfortunately, still rather primitive. Nonetheless, the southern continents offer some of the best opportunities for comparisons because of the relative taxonomic uniqueness of their floras and faunas, their long isolation from one another and from the northern continents, and their relative tectonic stability. What is needed soon is a second symposium or, better, a workshop to identify ecosystems and features best suited for further comparison, the nature of the data needed, and the ways in which future studies can be made more comparative than the past ones.

This volume represents a first step in a long road. It is easy to read, and there are relatively few typographical errors. The art work is varied in quality, and my particular copy of the book quickly fell apart, even with gentle handling.

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Fallout from Yucca Flat

Under the Cloud. The Decades of Nuclear Testing. RICHARD L. MILLER. Free Press (Macmillan), New York, 1986. xii, 547 pp., illus., + plates. \$24.95.

Justice Downwind. America's Atomic Testing Program in the 1950s. HOWARD BALL. Oxford University Press, New York, 1986. xviii, 280 pp., illus. \$21.95.

Fallout from nuclear testing, which began in the Nevada desert in 1951 and continued regularly, except for the moratorium from 1958 to 1962, until the limited test ban treaty was signed in 1963, created a serious hazard for the American people at the height of the Cold War. The authors of these two books give complementary accounts of the deadly nature of the resulting radiation. The difference lies in their points of focus. In *Under the Cloud*, Richard Miller makes it clear that all Americans, not just those living downwind from the Nevada test site, were exposed to heavy amounts of radiation. The vagaries of wind and rainfall meant that

people as far away as upstate New York received heavy doses of strontium-90 and iodine-131. Howard Ball, on the other hand, concentrates on those living downwind from the Nevada test site who experienced sufficient radiation to increase greatly their chances of coming down with cancer and leukemia. Both authors condemn the Atomic Energy Commission for using the imperatives of the Cold War to hide from the American people the real danger to public health and safety from the more than 100 atomic tests conducted at Yucca Flat. The casualties included not only the troops foolishly placed within a few miles of ground zero or the nearby livestock callously destroyed, but potentially all Americans who lived for more than a decade under this ominous shadow.

The strength of Miller's book lies in the detailed account of the individual tests and the careful tracking of the fallout patterns across the nation. He shows both the normal course of the clouds, across the Middle West and upstate New York, and variations that took the deadly material over the South and sometimes even back westward across Arizona and California. His account, together with fallout maps in the appendix, clearly supports his assertion that "every person alive [in the United States] during the 1950s and 1960s lived under the atomic cloud" (p. 9).

His book, however, is too detailed and impressionistic. He fails to offer any sustained analysis of why this serious risk to public health continued for so long without any effective public protest. By focusing on the tests themselves, he tends to slight the policy issues they raised, and particularly the movement that led to the moratorium in 1958 and the limited test ban treaty five years later. Miller ignores the problem of global fallout from the American shots in the Pacific and Russian explosions in Siberia, which provided the primary focus of the nuclear fallout debate of the '50s. It was the massive contamination of the atmosphere from the hydrogen bomb tests conducted by the two superpowers, not the smaller amount from the Nevada atomic tests, that led to the public outcry that finally forced the United States and the Soviet Union to restrict their testing to underground shots.

In *Justice Downwind*, Ball focuses on the impact of the Nevada tests on the 100,000 people in Nevada, Arizona, and especially southern Utah who lived downwind from the test site. This population, Ball contends, received 30% of the total fallout generated by the atmospheric tests conducted at Yucca Flat between 1951 and 1963.

As a political scientist, Ball is primarily concerned with the issues of government

responsibility and the legal claims of the downwinders, as he calls them, for compensation. He blames the AEC not only for negligence in the way it conducted the tests but also for deceiving the affected people about the risk of cancer and leukemia stemming from their exposure to the radioactive fallout. In tracing the downwinders' efforts to achieve justice, he praises federal judge Bruce C. Jenkins, who ruled in their favor in 1982, but is critical both of the government's refusal to accept that verdict and of the Congress for its failure to extend legislative relief to the radiation victims of southern Utah.

The key issue is the degree to which the higher rate of cancer and especially leukemia among the 100,000 downwinders can be tied directly to their exposure to radiation from the atomic tests. Ball acknowledges the inability of scientists to prove conclusively that low doses of radiation can cause cancer in humans, but he endorses the views of Chase Peterson of the University of Utah Medical School, who told a congressional committee in 1979 that "scientific proof will never be 100%, and you should not be looking for it" (p. 138). Instead, Ball argues that there is a large enough body of statistical and epidemiological evidence to establish "highly significant associations between the fallout and the ensuing cancers and leukemias" (p. 200).

Although Ball too often pleads the case for the downwinders, he does succeed in showing how irresponsibly the AEC acted at the height of the Cold War. The ultimate irony is that the people most affected, the largely Mormon population of the small towns of southern Utah, were staunchly patriotic citizens who believed that the Nevada tests were necessary to maintain American nuclear superiority over the Soviet Union in the 1950s. They were forced to pay a high price for this belief.

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Books Received

Adolescent Abortion. Psychological and Legal Issues. Report of the Interdivisional Committee on Adolescent Abortion, American Psychological Association. Gary B. Melton, Ed. University of Nebraska Press, Lincoln, 1986. viii, 152 pp., illus. \$17.50. Children and the Law.

Advances in Plant Pathology. D. S. Ingram and P. H. Williams, Eds. Vol. 4, Genetics of Pathogenicity Factors. Application to Phytopathogenic Bacteria. Arun K. Chatterjee and Anne K. Vidaver. Academic Press, Orlando, FL, 1986. xvi, 224 pp., illus. \$51.

Advances in the Psychology of Religion. L. B. Brown, Ed. Pergamon, New York, 1985. xii, 234 pp. \$30. International Series in Experimental Social Psychology, vol. 11. From a meeting, Oxford, UK, May 1982.

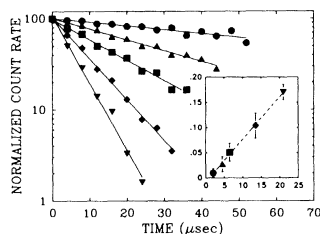
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For Concordance in Archaeological Analysis. Bridging Data Structure, Quantitative Technique, and Theory. Christopher Carr, Ed. Published in cooperation with the Institute for Quantitative Archaeology, University of Arkansas, by Westport, Kansas City, MO, 1985. xx, 622 pp., illus. \$55.

Forensic Neuropsychology. Charles J. Golden and Mary Ann Strider, Eds. Plenum, New York, 1986. x, 190 pp. \$39.50. Nebraska Neuropsychology Symposia Series, vol. 1. From a symposium, Omaha, May 1985.

The Forest Resources of the ECE Region. (Europe, the USSR, North America). United Nations Economic Commission for Europe, Food and Agriculture Organization, Geneva, 1985. vi, 223 pp., illus. Paper, \$21.

The Forgotten Peninsula. A Naturalist in Baja California. Joseph Wood Krutch. University of Arizona Press, Tucson, 1986. xviii, 277 pp., illus. Paper, \$9.95. Augmented reprint, 1961 edition.

From Birth to Five. A Study of the Health and Behaviour of Britain's 5-year-olds. N. R. Butler and Jean Golding, Eds. Brian Howlett *et al.*, Data Eds. Pergamon, New York, 1986. xxxii, 439 pp., illus. \$37.50; paper, \$22.50.

From Physician Shortage to Patient Shortage. The Uncertain Future of Medical Practice. Eli Ginzberg, Ed. Westview, Boulder, CO, 1986. xii, 172 pp., illus. \$25. Conservation of Human Resources Studies in Health Policy. Based on a conference, New York, Feb. 1986.

Introduction to Higher Order Categorical Logic. J. Lambek and P. J. Scott. Cambridge University Press, New York, 1986. x, 293 pp., illus. \$49.50. Cambridge Studies in Advanced Mathematics, 7.

An Introduction to Identification. J. P. Norton. Academic Press, Orlando, FL, 1986. xiv, 310 pp., illus. \$47.50; paper, \$22. A treatment "at a fairly modest mathematical level" of model-building from measurements on a dynamical system.

An Introduction to Rumen Studies. J. W. Czerkawski. Pergamon, New York, 1986. x, 236 pp., illus. \$29.50; paper, \$16.50.

Introduction to Supersymmetry and Supergravity. P. West. World Scientific, Philadelphia, 1986. x, 289 pp., illus. \$37; paper, \$22.

Introduction to the Graphical Kernel System (GKS). F. R. A. Hopgood *et al.* 2nd ed, revised for the International Standard. Academic Press, Orlando, FL, 1986. xiv, 250 pp., illus. Paper, \$23.95.

An Introduction to Three-Dimensional Climate Modeling. Warren M. Washington and Claire L. Parkinson. University Science Books, Mill Valley, CA, and Oxford University Press, New York, 1986. xvi, 422 pp., illus. \$28.

The Last Extinction. Les Kaufman and Kenneth Mallory, Eds. Published in cooperation with the New England Aquarium by MIT Press, Cambridge, MA, 1986. xii, 208 pp., illus. \$16.95. From a lecture series, Boston, 1984.

Lattice Dynamical Foundations of Continuum Theories. Elasticity, Piezoelectricity, Viscoelasticity, Plasticity. Attila Askar. World Scientific, Singapore, 1985 (U.S. distributor, Taylor and Francis, Philadelphia). xiv, 192 pp., illus. \$28. Series in Theoretical and Applied Mechanics, vol. 2.

Learning and Memory. A Biological View. Joe L. Martinez, Jr. and Raymond P. Kesner, Eds. Academic Press, Orlando, FL, 1986. xviii, 452 pp., illus. \$49.50; paper, \$24.50.

Learning and Memory. Mechanisms of Information Storage in the Nervous System. Hansjurgen Matthies. Pergamon, New York, 1986. xiv, 414 pp., illus. \$85. Advances in the Biosciences, vol. 59. From a symposium, Magdeburg, GDR, Oct. 1985.

The Lectins. Properties, Functions, and Applications in Biology and Medicine. Irvin E. Liener, Nathan Sharon, and Irwin J. Goldstein, Eds. Academic Press, Orlando, FL, 1986. xviii, 600 pp., illus. \$72.50. Molecular Biology.

Lectures on Special Relativity. M. G. Bowler. Pergamon, New York, 1986. x, 72 pp., illus. \$15; paper, \$7.50.

Lessons. An Autobiography. An Wang with Eugene Linden. Addison-Wesley, Reading, MA, 1986. xii, 248 pp. + plates. \$17.95.

The Lexical Bar. David Corson. Pergamon, New York, 1985. xii, 130 pp., illus. \$29; paper, \$13.75.

Molecular and Cellular Aspects of Calcium in Plant Development. A. J. Trewavas, Ed. Plenum, New York, 1986. xiv, 452 pp., illus. \$75. NATO Advanced Science Institutes Series A, vol. 104. From a workshop, Edinburgh, July 1985.

Molecular Aspects of Neurobiology. Rita Levi Montalcini *et al.*, Eds. Springer-Verlag, New York,

1986. xii, 205 pp., illus. \$59.50. Proceedings in Life Sciences. Based on a conference, Florence, June 1985.

The Psychiatric Hospital. Context, Values, and Therapeutic Processes. Henry L. Lennard in collaboration with Alexander Gralnick. Human Sciences Press, New York, 1986. 222 pp., illus. \$24.95.

Quantum Theory of Collective Phenomena. G. L. Sewell. Clarendon (Oxford University Press), New York, 1986. xiv, 229 pp., illus. \$55. Monographs on the Physics and Chemistry of Materials.

The Quark Structure of Matter. M. Jacob and K. Winter, Eds. World Scientific, Singapore, 1986 (U.S. distributor, Taylor and Francis, Philadelphia). xiv, 786 pp., illus. \$74. From a meeting, Strasbourg, France and Karlsruhe, FRG, Sept. 1985.

Real and Stochastic Analysis. M. M. Rao, Ed. Wiley, New York, 1986. xiv, 347 pp. \$39.95.

Textbook of Histology. Finn Geneser. Munksgaard, Copenhagen, and Lea and Febiger, Philadelphia, 1986. 831 pp., illus. \$49.50.

Theory of Holors. A Generalization of Tensors. Parry Moon and Domina Eberle Spencer. Cambridge University Press, New York, 1986. xx, 392 pp., illus. \$69.50.

The Therapeutic Perspective. Medical Practice, Knowledge, and Identity in America, 1820-1885. John Harley Warner. Harvard University Press, Cambridge, MA, 1986. xii, 367 pp., illus. \$32.50.

The Thorny Way of Truth. Part II. Stefan Marinov. 3rd ed. International Publishers "East-West," Graz, Austria, 1986. iv, 351 pp., illus. Paper, \$25.

Time, Science, and Society in China and the West. J. T. Fraser, N. Lawrence, and F. C. Haber, Eds. University of Massachusetts Press, Amherst, 1986. xx, 262 pp., illus. \$35. The Study of Time, 5. From a conference, Castello di Garganza, Italy, 1983.

Time Travel and Papa Joe's Pipe. Alan Lightman with ten illustrations by Laszlo Kubinyi. Penguin, New York, 1986. viii, 168 pp. Paper, \$5.95. Reprint, 1984 edition.

Tin in Antiquity. Its Mining and Trade Throughout the Ancient World with Particular Reference to Cornwall. R. D. Penhallurick. The Institute of Metals, London, 1986 (U.S. distributor, The Institute of Metals North American Publications Center, Brookfield, VT). xiv, 271 pp., illus. \$48; to members, \$38.40.

To Advance Knowledge. The Growth of American Research Universities, 1900-1940. Roger L. Geiger. Oxford University Press, New York, 1986. x, 325 pp. \$27.50.

Tokamak Start-Up. Problems and Scenarios Related to the Transient Phases of a Thermonuclear Fusion Reactor. Heinz Knoepfel, Ed. Plenum, New York, 1986. x, 432 pp., illus. \$75. Ettore Majorana International Science Series, vol. 26. From a course, Erice, Italy, July 1985.

Touching. The Human Significance of the Skin. Ashley Montagu. 3rd ed. Perennial Library (Harper and Row), New York, 1986. xvi, 495 pp., illus. \$18.95; paper, \$9.95.

Toward a New Security. Lessons of the Forty Years Since Trinity. Union of Concerned Scientists, Cambridge, MA, 1985. 73 pp., illus. Paper, \$3.50.

Trace Elements in Human and Animal Nutrition. 5th ed. Vol. 2. Walter Mertz, Ed. Academic Press, Orlando, FL, 1986. xii, 499 pp., illus. \$52.50.

Transport of Suspended Solids in Open Channels. W. Bechteler, Ed. Balkema, Accord, MA, 1986. x, 268 pp., illus. \$50. From a symposium, Munich, June 1985.

Ultraviolet Spectroscopy of Proteins. Alexander P. Demchenko. Springer-Verlag, New York, 1986. xii, 312 pp., illus. \$95. Translated with revisions from the Russian edition (Kiev, 1981).

The Venus International Reference Atmosphere. A. J. Kliore, V. I. Moroz, and G. M. Keating, Eds. Published for the Committee on Space Research by Pergamon, New York, 1986. viii, 305 pp., illus. Paper, \$52. Advances in Space Research, vol. 5, no. 11.

Verification. How Much is Enough? Allan S. Krass. Lexington Books (Heath), Lexington, MA, 1986. x, 273 pp., illus. Paper, \$13.95. Sponsored by Sipri, Stockholm International Peace Research Institute.

Viral Structure. James R. Harris and Robert W. Horne, Eds. Academic Press, Orlando, FL, 1986. xii, 452 pp., illus. \$98. Electron Microscopy of Proteins, vol. 5.

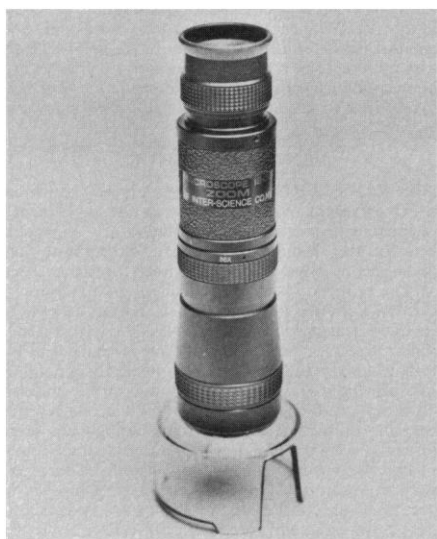
Viruses, Immunity, and Immunodeficiency. Andor Szentivanyi and Herman Friedman, Eds. Plenum, New York, 1986. xiv, 365 pp., illus. \$55. University of South Florida International Biomedical Symposia Series. From a symposium, Tampa, FL, April 1984.

With Our Own Hands. Research for Third World Development: Canada's Contribution Through the International Development Research Centre 1970-1985. IDRC, Ottawa, Ontario, 1986. 206 pp., illus. Paper.

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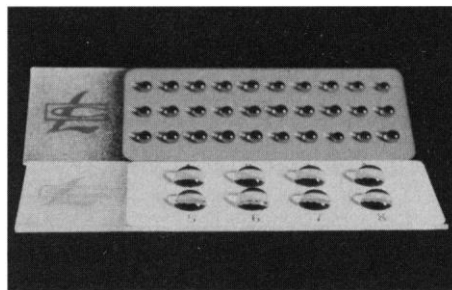
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Polaroid Product Catalog presents a line of Polaroid and related photo and computer-video imaging equipment. Scientific Instrument Services. Circle 532.

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Electrode Handbook contains full-size color illustrations of 60 pH and titration electrodes, as well as sections on theory and method. Fisher Scientific. Circle 534.

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Applications are sought for permanent full-time positions located in Sacramento and Anaheim. Candidates should have a strong background in pesticide residue chemistry and mass spectroscopy, but others with related experience are encouraged to apply. An oral examination for these positions, with a final filing date of 31 January 1987, will be conducted during February 1987. Appointments are anticipated to begin during the first quarter of 1987. Interested applicants should contact **Dr. George R. Tichelaar, 3292 Meadowview Road, Sacramento, CA 95832.** Telephone: 916-427-4595 for more information on the positions, a copy of the examination announcement, and an application form. *The State of California is an Affirmative Action/Equal Opportunity Employer.*

ANIMAL SCIENCE

ASSISTANT PROFESSOR—Ruminant Nutritionist—Department of Animal Science and Agricultural Biochemistry, University of Delaware, invites applicants for the position of ruminant nutritionist. The appointment is a full-time, tenure-track (assistant professor) position. A Ph.D. in animal or dairy science or nutritional physiology is required. Candidates should be interested in using novel approaches to improve rumen fermentative digestion of agricultural materials and by-products for production of food and fiber. Experience in molecular biology is desirable. The successful candidate will be responsible for development of a strong research program in ruminant nutrition/microbiology and development of an upper level undergraduate/graduate course in ruminant nutrition. The individual will also serve as a resource person for livestock extension programs in the state. Send curriculum, letter of application, statement of research interests, and three letters of reference to: **Dr. William Saylor, Department of Animal Science and Agricultural Biochemistry, 045 Townsend Hall, University of Delaware, Newark, DE 19717-1303.** The University of Delaware is an Equal Opportunity/Affirmative Action Employer.

The Ohio State University is seeking applications for a tenure-track position in veterinary clinical pharmacology at the assistant or associate professor level. D.V.M. and/or Ph.D. required. Training, experience, and interest in basic and clinical veterinary pharmacology preferred. Responsibilities include teaching, research, clinical service, developing independent research programs. Salary commensurate with experience. Submit curriculum vitae, letter of intent, names and addresses of three references by 20 February 1987 to: **Dr. Y. C. Lin, Chairman, Veterinary Physiology and Pharmacology, The Ohio State University, 1900 Coffey Road, Columbus, OH 43210.** OSU is an Equal Opportunity, Affirmative Action Employer.

Immediate opening for Ph.D. as **ASSISTANT CHAIRMAN.** Experience in neurobiology, physiology, neuropsychology, or similar. Strong administrative skills and ability to communicate effectively with other faculty, staff, and students essential. Responsibilities: interacting with University administration at all levels; overseeing departmental and research grant accounts; coordination of departmental teaching, graduate student recruiting and financial aid, and so forth. Duties are largely administrative but applicants interested in contributing to teaching or research are welcome. Application and curriculum vitae to: **Dr. Peter Dallos, Chairman, Department of Neurobiology and Physiology, Northwestern University, Hogan Hall, Evanston, IL 60201.** Northwestern is an Equal Opportunity Employer.

THE DEPARTMENT OF BIOCHEMISTRY, DUKE UNIVERSITY MEDICAL CENTER invites applications for the position of **Assistant Professor** (tenure-track). The person will be expected to establish a strong independent research program and to teach both medical and graduate students. The field of interest is open, although some preference may be given to candidates interested in structural biochemistry or molecular aspects of cell biology. Send résumé, summary of research interest and three letters of reference to: **Robert L. Hill, Duke University Medical Center, Durham, NC 27710.** Duke University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

AQUATIC CHEMISTS, TOXICOLOGISTS OR ECOLOGISTS. Position(s) now available in aquatic toxicology or chemical ecology at M.S. or Ph.D. level. Experience with environmental chemistry and health effects of PCBs, environmental monitoring, or freshwater sediments desirable. Early applications encouraged. Send résumé and three letters of reference to: **Dr. W. J. Birge, 101 Morgan Building, Biological Sciences, University of Kentucky, Lexington, Kentucky 40506-0225.** An Equal Opportunity/Affirmative Action Employer.

HARVARD SCHOOL OF PUBLIC HEALTH Assistant or Associate Professors of Biostatistics

The Department of Biostatistics, Harvard School of Public Health is recruiting two to three faculty. Candidates should have a doctorate in biostatistics, statistics, or a related field. At the assistant professor rank, candidates should have at least one postdoctoral year. Candidates for associate professor should show evidence of productivity in methodologic and collaborative research. Two of the positions will be joint with the Dana-Farber Cancer Institute, Harvard Medical School. The duties involve a combination of collaborative and methodologic research as well as teaching responsibilities. Please send a complete curriculum vitae plus names of at least three references to:

Search Committee
Department of Biostatistics
Harvard School of Public Health
677 Huntington Avenue
Boston, MA 02115

Harvard University is an Equal Opportunity Employer.

ASSISTANT PROFESSOR OF INTERNAL MEDICINE AND MOLECULAR GENETICS, The University of Texas Health Science Center at Dallas (UTHSCD). Requirements: M.D. degree; research fellowship training in molecular genetics with clinical training in endocrinology and hypertension. Complete command of receptor biochemistry as well as well grounded in lipid metabolism. Duties: internal medicine attending; consultation on hyperlipidemias; independent research on hyperlipidemias; direct medical student teaching in medical genetics. Send curriculum vitae and supporting documents to: **Donald W. Seldin, M.D., UTHSCD, 5323 Harry Hines Boulevard, Dallas, TX 75235-9030.** UTHSCD is an Equal Opportunity Employer.

ASSISTANT PROFESSORS, tenure-track, two positions. **Biology.** Preference given to applicants with teaching experience in cell/molecular biology. **Environmental Science.** Preference given to applicants with expertise in solid and/or hazardous waste management. Teaching and research required. Ph.D. required. Send résumé, summary of teaching and research interests, and name/address of three references to: **Chairman, Search Committee, Biological and Environmental Sciences, McNeese State University, Lake Charles, LA 70609.** Equal Opportunity/Affirmative Action Employer.

POSITION OPEN—Large interdisciplinary Department of Environmental Health Sciences seeks an **ASSISTANT PROFESSOR IN TOXICOLOGY.** Two to three years of postdoctoral experience in molecular approaches to toxicology preferable, with research in membrane and/or receptor interactions. Submit curriculum vitae, a brief statement of research interests, and names of three references to: **Dr. Robert J. Rubin, Program in Biochemical Toxicology, Division of Experimental Pathology and Toxicology, Johns Hopkins School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore, MD 21205.**

ASSISTANT PROFESSOR OF ZOOLOGY, University of Arkansas-Fayetteville. Tenure-track positions available fall 1987: Genetics or cell biology are preferred areas of expertise. Required qualifications: Ph.D., evidence of research productivity and funding, and ability to teach graduate/undergraduate courses in general biology and area of specialty. Preference will be given to qualified candidates with postdoctoral research in molecular or population genetics. Review begins 1 March 1987 and continues until filled. Send curriculum vitae and names of three referees to: **Dr. C. J. Amlaner, Chairman, Department of Zoology, SE 632, University of Arkansas, Fayetteville, AR 72701.** Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSSIBLE COGNITIVE STUDIES POSITION(S)

ASSISTANT PROFESSOR: Possible tenure-track position in cognitive studies and either linguistics or psychology to begin 1 July 1987; there is the possibility of an additional position to begin 1 July 1987 or 1988. Areas of specialization are open, but candidates should demonstrate interdisciplinary research and teaching abilities; the successful candidate will be not only an excellent linguist or psychologist (or both) but will address questions that cut across traditional disciplinary boundaries. Primary appointment will be in either the Department of Modern Languages and Linguistics or in the Department of Psychology; candidates will also participate in the newly organized Cognitive Studies Program, which involves faculty not only from these departments but also from Philosophy, Mathematics, Computer Science, Neurobiology and Behavior, and Human Development and Family Studies. Possible areas of research include natural language processing and parsing models, computational vision, formal models of knowledge representation and/or reasoning, syntactic and semantic representation, language acquisition (first and second), models of conceptual change, decision theory, speech perception, psycholinguistics, and computational linguistics. Exceptionally well-qualified and experienced individuals may apply at the associate or full professor level, although an appointment at a higher rank has not yet been authorized. Dossier including curriculum vitae, sample reprint or preprint of completed research, and letters of recommendation sent directly from three referees should go to:

Cognitive Studies Search Committee, c/o Suzanne Wurster, Department of Psychology, Uris Hall, Cornell University, Ithaca, NY 14853. Review of applications will begin 23 January 1987. *Cornell is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSORSHIPS. Due to retirements, the **Department of Biology** seeks to fill tenure-track faculty openings in population biology, molecular biology and microbial ecology. Successful candidates will be expected to participate in teaching at the undergraduate and master's levels and attract outside funding to develop an active research program. Ph.D. required with postdoctoral work preferred. Requires a strong commitment to a broad liberal arts education. **POPULATION BIOLOGY**—Background in zoology, ecology, and strong quantitative background in theoretical and experimental field and laboratory analysis. Experience in evolutionary biology or population genetics desirable. **MOLECULAR BIOLOGY**—Research experience utilizing monoclonal antibody techniques or in molecular evolution utilizing recombinant DNA techniques. Strong background in plant science or zoology desirable. **MICROBIAL ECOLOGY**—Field open but must focus on significant problems using biochemical, physiological and/or molecular approaches. Ph.D. required. Starting 1 September 1987. Applications close 13 February 1987. Submit résumé, three letters of recommendation, and official transcripts to: **Dr. G. S. Trelawny, Head, Department of Biology, James Madison University, Harrisonburg, VA 22807.**

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

ASSOCIATE DIRECTOR, Recombinant DNA Core Laboratory. Position available immediately for individual with 3 to 5 years of postdoctoral experience in cloning, sequencing and nucleic acid analytical methods to collaborate with a group of investigators studying various aspects of reproductive biology. This is an outstanding opportunity for interaction with a number of scientists in several departments of the UCLA School of Medicine. Some time and support to develop an independent research program can also be provided. Salary, benefits, and academic appointment will be suitable to training and experience. Send curriculum vitae with the names of three references to: **Larry J. Shapiro, M.D., Professor of Pediatrics and Biological Chemistry, UCLA School of Medicine, Division of Medical Genetics, 1000 West Carson Street, Torrance, CA 90509.**

POSITIONS OPEN

ASSISTANT PROFESSORSHIP IN BIOCHEMISTRY AND MOLECULAR BIOLOGY. The Department of Biochemistry and Molecular Biology, University of North Dakota School of Medicine, invites applications for a tenure-track position at the assistant professor level. A Ph.D. or M.D. degree and postdoctoral experience, publications, and ability to obtain extramural research support are essential. Some teaching experience, preferably at the medical school level, is highly desirable. The individual must have a strong commitment to medical and graduate education and to conducting an independent research program. Duties will include teaching of medical, graduate, and undergraduate students; conducting independent research; and service on committees. All applicants will be considered; preference may be given to individuals who can apply molecular biological techniques to the study of eukaryotic systems. Salary is negotiable based on credentials. Prior to 10 March 1987 applicants are to submit their curriculum vitae including publications a synopsis of both present and proposed research, and to cause three letters of reference to be sent to: **Dr. Robert C. Nordlie, Chairman, Department of Biochemistry and Molecular Biology, University of North Dakota School of Medicine, Grand Forks, ND 58202.** The University of North Dakota is an Equal Opportunity Employer.

ASSISTANT PROFESSOR—FOOD MICROBIOLOGIST. Rutgers—The State University of New Jersey seeks applicants for a tenure-track, 70% research and 30% teaching, 10-month assistant professor appointment in the Department of Food Science. The successful candidate will be expected to assume responsibility for and further develop a research program in food microbiological safety; seek external research funding; teach and advise graduate and undergraduate students. A Ph.D. in microbiology, food science, or a closely related field is required. Demonstrated skills in food microbiological safety are essential and related postdoctoral experience desirable. U.S. citizenship or permanent visa is required. Salary is commensurate with experience. The Department of Food Science is recognized for its excellence, with 150 matriculated graduate students, and is the home of the Center for Advanced Food Technology. Application deadline is 15 March 1987 or until a suitable candidate is identified. Please submit curriculum vitae, transcripts of all course work, a copy of relevant reprints of refereed publications, a description of research interests and plans, and arrange to have three letters of recommendation sent independently to: **Dr. George M. Carman, Chairman, Search Committee, Department of Food Science, Rutgers, The State University of New Jersey, P.O. Box 231, New Brunswick, NJ 08903.** Equal Opportunity/Affirmative Action Employer.

DEPARTMENT OF BIOLOGY, CALIFORNIA STATE COLLEGE, BAKERSFIELD

ASSISTANT PROFESSOR IN VERTEBRATE MORPHOLOGY, tenure-track, Ph.D. required. Preference given to morphologists with broad general biology background; strong commitment to teaching with emphasis on student problem solving skills and writing. Duties: teaching courses in vertebrate morphology, human anatomy and general biology; scholarly activity; college services. Send curriculum vitae, transcripts and three letters of reference to: **D. Hinds, Department of Biology, California State College, Bakersfield, 9001 Stockdale Highway, Bakersfield, CA 93311-1099.** Application deadline: 15 February 1987. *CSB is an Affirmative Action/Equal Opportunity Employer.*

BEHAVIORAL NEUROBIOLOGY

Applications are invited for a faculty position (tenure-track) to be associated with the Centre for Studies in Behavioral Neurobiology. Applicants from any field of neuroscience will be considered; the successful applicant will be expected to establish a strong research program complementing the research of existing Centre members into the brain and hormonal mechanisms of motivated behavior. Duties will include undergraduate teaching (one course per semester) and supervision of graduate students. Appointment will be made at the level of assistant or associate professor. Start 1 June 1987. Send statement of research interests, curriculum vitae, and three letters of reference to: **R. A. Wise, Centre for Studies in Behavioral Neurobiology, Concordia University, 1455 de Maisonneuve Boulevard, West, Montreal, Canada, H3G 1M8.** In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

POSITIONS OPEN

BIOCHEMIST (Ph.D., D.O., or M.D.) faculty position available to teach and work independently and/or collaboratively with other research/teaching faculty. Research more than 80 percent; teaching less than 20 percent. Multiyear contracts available. Salary and academic rank commensurate with training experience and grant track record. Please send résumé, curriculum vitae with publications list, past and present grant support information and three recommendations to: **Search Committee, Dr. Arnold L. Nagler, Associate Dean, Preclinical Medical Education, New York College of Osteopathic Medicine, Old Westbury, NY 11568.**

BIOLOGISTS

Whitman College, a small liberal arts college committed to quality teaching, seeks two 1-year sabbatical replacements to teach undergraduate courses (cell biology, developmental biology, genetics, and physiology) and to help direct undergraduate research. Candidates will fill their teaching loads with additional electives, to be negotiated with the Department. Ph.D. required. Send curriculum vitae, transcripts, and three letters of reference to: **Dr. E. F. Anderson, Chair, Department of Biology, Whitman College, Walla Walla, WA 99362. Whitman College is an Affirmative Action Equal Opportunity Employer.**

TWO BIOLOGY FACULTY POSITIONS

Applications are invited for two tenure-track positions at the level of assistant professor beginning 1 September 1987. Candidates must have postdoctoral experience, a commitment to establishing an externally funded research program, and a willingness to participate in both undergraduate and graduate training programs.

(i) **Cellular/molecular biologist** to teach upper level courses in cellular/molecular biology; research interests in parasitology or developmental and/or reproductive biology preferred.

(ii) **Reproductive/developmental biologist** whose teaching responsibilities would include undergraduate invertebrate zoology and an advanced course in the applicant's area of specialization.

Review of applications will begin on 15 February 1987, and continue until positions are filled. Candidates should submit a letter of application, curriculum vitae, research plans, and names of three references to: **Dr. Daniel D. Jones, Department of Biology, University of Alabama at Birmingham, University Station, Birmingham, AL 35294.**

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

BIOSTATISTICIAN. Tenure-track position at associate professor or professor level. To build and head biostatistical unit in dynamic, heavily funded, research-oriented medical school. Unit will serve entire college. Competitive salary. To start July 1987. Ph.D. required, medical school experience preferred. Curriculum vitae, reprints, three references by 31 March 1987, to: **Marshall B. Jones, Chairman, Department of Behavioral Science, The Pennsylvania State University College of Medicine, Hershey, PA 17033. Affirmative Action/Equal Opportunity Employment.**

CELL BIOLOGIST UNIVERSITY OF SOUTH CAROLINA

The Department of Biology continues its expansion in regulatory biology and biotechnology. Applications are invited for one and potentially two tenure-track positions in cell biology. It is anticipated that the appointment will be made at the level of assistant professor, but exceptional senior-level candidates will be considered. The ability of a candidate to establish a vigorous, externally funded research program in cell biology is a prime consideration. The most successful candidate(s) will be expected to teach in the cell biology curriculum. Excellent opportunities exist for interacting with a large group of scientists actively pursuing research in cellular, molecular, and developmental biology and genetics. Ample laboratory space and start-up support will be provided. Applicants should send their curriculum vitae, a statement of research interest and three letters of references to: **Dr. Anthony Huang, Chairman, Cell Biology Search Committee, Biology Department, University of South Carolina, Columbia, SC 29208.** Initial consideration will be given to those applications received by 1 March 1987. *The University of South Carolina is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CARDIOVASCULAR PHYSIOLOGIST to join active Cardiology Research Laboratory investigating pericardial and ventricular function in acute and chronic canine models. The successful candidate will have a Ph.D. and postdoctoral research experience and qualify for a joint appointment in medicine and physiology at the assistant professor level. Salary commensurate with experience. Immediate opening. Interested candidates should submit curriculum vitae and names of two references to: **L. Samuel Wann, M.D., Cardiology Division, Medical College of Wisconsin, 8700 West Wisconsin Avenue, Milwaukee, WI 53226.**

THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT DALLAS DEPARTMENT OF CELL BIOLOGY CHAIRPERSON

Applications are invited for the position of professor and chairperson of the Department of Cell Biology at the University of Texas Health Science Center, Dallas. Candidates must have a distinguished research record and proven leadership and administrative ability. Curriculum vitae and names and addresses of three references should be submitted to: **the Chairman of the Search Committee at the following address: Alfred G. Gilman, M.D., Ph.D., Chairman, Department of Pharmacology, University of Texas Health Science Center, Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75235. The University of Texas is an Equal Opportunity Employer.**

DEVELOPMENTAL BIOLOGY. Ph.D. required. Tenure-track, teach nonmajors biology and develop and teach a course(s) in developmental biology. The majority of the teaching load is in the nonmajors course. In the developmental area an orientation toward molecular, genetic or cellular approaches is preferred. Teaching and postdoctoral experience desirable. Research facilities and opportunities available. Rank and salary commensurate with experience. Starting 24 August 1987. Screening begins 23 February 1987. *Equal Opportunity/Affirmative Action Employer.* For details or to apply contact: **V. Thiesfeld, Chair, Department of Biology, University of Wisconsin-Stevens Point, Stevens Point, WI 54481. Telephone: 715-346-2159.**

CELL/MOLECULAR BIOLOGY

Distinguished scholar and teacher to fill the Willie D. Bryan Professorship of Biology. Applicant must have a Ph.D. in biology and teaching ability in cell biology, and either histology or embryology. Experience in general biology or anatomy and physiology helpful. Successful candidate will be expected to establish a strong undergraduate research program supported by extramural funding. Arkansas College is an independent, church-related college with an endowment in excess of \$38 million. Send application letter, résumé, statement of research goals and names and phone numbers of three references to: **Dr. Bert E. Holmes, Chairman of the Bryan Professorship Search Committee, Arkansas College, Batesville, AR 72501. Telephone: 501-793-9813. Affirmative Action/Equal Opportunity Employer.**

CELLULAR/MOLECULAR NEUROBIOLOGY

Applications are invited for a position at the assistant professor (tenure-track) or associate/full professor (tenured) level. Available 1 September 1987. Rank and salary will be commensurate with qualifications. Candidates should have Ph.D. or M.D. or equivalent and demonstrated ability to conduct independent research and attract extramural funding. Background in manipulating gene expression in mammalian cells, in particular, developing neural tissue pertaining to neuropeptides and/or cytoskeletal elements is desirable. Applicants also interested in synaptic plasticity, neuroendocrine regulation, or the cellular basis of behavior are encouraged to apply. Teaching experience in neuroanatomy desirable. For fullest consideration, applicants should submit curriculum vitae, a brief statement of research interests, representative reprints, and names of three references by 15 April 1987 to: **Dr. G. D. Pappas, Department of Anatomy, University of Illinois College of Medicine at Chicago, P.O. Box 6998 (M/C 512), Chicago, IL 60680.**

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

POSITIONS OPEN

CELL BIOLOGY/IMMUNOLOGY—Tenure-track assistant professor in biological sciences, starting September 1987. We are seeking a competent cell biologist capable of (i) teaching a general cell biology course and a course in immunology, both with laboratory; and (ii) developing an active research program in which undergraduates and master's degree candidates can participate. Applicants should have a Ph.D.; postdoctoral experience is recommended. Smith College, an independent liberal arts college for women, provides excellent facilities for research and teaching, and for interaction with colleagues at four neighboring academic institutions. Send curriculum vitae, a statement of teaching and research objectives, and three letters of recommendation to: **Search Committee, Department of Biological Sciences, Smith College, Northampton, MA 01063 by 30 January 1987. Smith College is an equal opportunity employer. Women and minorities are encouraged to apply.**

CHAIR, DEPARTMENT OF GEOLOGY UNIVERSITY OF NEBRASKA-LINCOLN

Applications and nominations are invited for Chair of the Department of Geology. Salary and rank are open and will reflect experience and qualifications. Responsibilities include leadership of the department and maintenance of strong ties with the State Museum, State Geological Survey, alumni, industry, and government agencies. The applicant should have developed an internationally recognized research program, preferably using quantitative approaches. A record of success with funding agencies is expected. The chair is also expected to teach and direct the work of graduate students. The Department has 13 faculty; qualified staff from the Museum and the Survey also teach and direct the work of graduate students. The Department has modern newly renovated quarters and extensive instrumentation and computer capabilities. Graduate student and faculty research emphasizes the integration of field and laboratory studies, primarily in soft-rock geology and hydrogeology. Applicants should send curriculum vitae, list of publications, a description of current and planned research, a list of courses taught, and names and addresses of three references by March 1 (or until the position is filled) to: **Anthony F. Starace, Chair, Geology Search Committee, 1223 Oldfather Hall, University of Nebraska-Lincoln, Lincoln, NE 68588-0312. Affirmative Action/Equal Opportunity Employer.**

CHAIRPERSON OF PHARMACOLOGY

The University of Health Sciences/The Chicago Medical School is accepting applications for the chair of Pharmacology. Candidates should have a strong research program, a commitment to teaching medical and graduate students, and the ability to provide aggressive leadership for scientific excellence and the development of the department. Submit curriculum vitae by 9 February 1987 to: **Dr. V. Nair, Dean of Graduate School, University of Health Sciences/The Chicago Medical School, 3333 Green Bay Road, North Chicago, Illinois 60064. An Equal Opportunity/Affirmative Action Employer.**

CHEMIST—(i) Will engage in the total syntheses of antitumor antibiotics of the anthracycline family. Starting materials will include carbohydrates and isoquinoline derivatives. (ii) Supervise graduate students in synthetic organic chemistry. (These are an adjunct lecturer and a teaching assistant.) Must have a Ph.D. degree in synthetic organic chemistry. Must have 2 years of experience in the job offered or 2 years of experience as a research associate—Synthetic Organic Chemistry. (a) Must be able to operate a Nuclear Magnetic Resonance Spectrometer. (b) Must be able to use a chromatotron and hydrogenation apparatus including Parr. Salary \$23,222 per year; 40-hour week. Applicants send résumé to: **NYS Job Service JO# NY 8002152, 175 Remsen Street, 2nd Floor, Brooklyn, NY 11201.**

DEAN, SCHOOL OF SCIENCE AND TECHNOLOGY, SOUTHERN ARKANSAS UNIVERSITY. Position requires an earned doctorate, administrative experience at the college level desirable. Selected individual must be eligible for a tenure-track appointment at professor rank. Position includes one-half teaching duties and one-half administrative duties. Application review will begin 26 January 1987. Interested persons should send a letter of application, résumé, and the names of three references to: **Mr. Roger W. Giles, Director of Personnel, Southern Arkansas University, SAU Box 1288, Magnolia, AR 71753. Equal Opportunity Affirmative Action Employer.**

POSITIONS OPEN

FACULTY POSITION IN BIOCHEMISTRY AND MOLECULAR BIOLOGY MAYO CLINIC AND MAYO MEDICAL SCHOOL

Staff-level position in Department of Biochemistry and Molecular Biology. Outstanding molecular or developmental biologist with demonstrated expertise in either somatic cell or germline gene transfer techniques preferred. Highly qualified individuals with other molecularly oriented research interests are also encouraged to apply. Appointment level and academic rank will be commensurate with qualifications. Mayo Clinic offers an outstanding research environment in a medical and academic setting. Send curriculum vitae, statement of research interests, and names of three references by 23 January 1987, to: **Dr. Michael J. Getz, Chairman, Search Committee, Department of Biochemistry and Molecular Biology, Mayo Clinic/Foundation, Rochester, MN 55905. Telephone: 507-284-2875. An Equal Opportunity/Affirmative Action Institution.**

ECOLOGY. Three-year term position (subject to annual renewal) for a broadly trained field biologist at the **assistant professor/instructor** level. Begins 1 July 1987, pending final authorization. Applicants should be qualified to teach ecology, introductory organismic biology, introductory genetics laboratory, and advanced course in specialty. A substantial commitment to research involving undergraduates is expected. Send curriculum vitae, graduate and undergraduate transcripts, statement of research interests, and letters from three referees by 13 February to: **Dr. J. L. Richardson, Search Committee Chairperson, Department of Biology, Franklin and Marshall College, Lancaster, PA 17604-3003.** Franklin and Marshall is a coeducational liberal arts college with a tradition of strong training in the sciences. *An Equal Opportunity Employer.*

EMINENT SCHOLAR IN APPLIED ECOSYSTEM ECOLOGY DEPARTMENT OF ZOOLOGY

The Department of Zoology of Miami University seeks applications and nominations for an **Endowed Professorship in Applied Ecosystem Ecology** funded recently by the State of Ohio and Miami University.

Applicants must be recognized leaders in ecosystem ecology. He/she is expected to conduct research at the ecosystem level or higher and to interact with a group of 11 ecologists working in basic and applied ecology (e.g., agroecosystem ecology, eco-toxicology, aquatic ecology, behavioral ecology). In addition to engaging students in research, the eminent scholar will offer an advanced course in systems ecology. It is anticipated that the incumbent will interact with state and federal agencies in developing public policy on environmental issues.

The person selected will receive a tenured, full professor appointment on a 9-month basis. Additional salary may be obtained from grants/contracts. Space will be provided in the new Biological Sciences Building and at the Ecology Research Center. A competitive salary and fringe benefits package is available, along with a one-half time secretary and a postdoctoral position funded for 2 years.

A curriculum vitae, three letters of recommendation, and a brief description of projected scholarly activities for the next 5 to 10 years should be sent to: **R. G. Sherman, Chair, Department of Zoology, Miami University, Oxford, OH 45056.**

Inquiries regarding this position are encouraged. Letters should be addressed as above; **telephone inquiries to: 1-513-529-3100.** Applications will be considered until the position is filled; however, the Search Committee will begin to review applications on 2 February 1987. *Miami University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

DIRECTOR, WAVE PROPAGATION LABORATORY (WPL) The Environmental Research Laboratories, NOAA, DOC in Boulder, Colorado are seeking applicants for a scientific manager to serve as director, WPL. Incumbent is the focus within NOAA for the development and research application of new and efficient methods for remotely sensing man's geophysical environment. Areas included in the program are: propagation studies, atmospheric lidar, wind profiling research, thermodynamic profiling, radar meteorology, atmospheric studies, meteorological research, and marine remote sensing. Position is Career Reserved in the Senior Executive Service. Salary is \$61,296 to \$72,300 per annum—negotiable based on experience, scientific achievements, and technical/managerial qualifications.

QUALIFICATIONS: Broad understanding of theory and current state of the art of remote sensing of atmospheric and oceanic parameters by active and passive electromagnetic and acoustic techniques, and their use; high level competence in the physical sciences sufficient to perceive complex problems in broad perspective; and demonstrated ability to perform personal senior-level research and to publish significant research findings in refereed literature. Executive competence in broad areas of administration such as program planning and evaluation, multigroup coordination, resource acquisition and administration, organizational representation, and human resource utilization including EEO. **TO APPLY:** Contact Mrs. Evelyn Fritz, 301-443-8834 for application forms. Ref. Vac. #NS87-04EF. Applications must be received prior to closing date of 28 February 1987. *An Equal Opportunity Employer.*

*Salary as of 15 December 1986 subject to statutory change.

FACULTY POSITION PROGRAM IN PROTEIN STRUCTURE AND DESIGN UNIVERSITY OF MICHIGAN

Applications are invited for a tenured or tenure-track position (rank open) associated with the recently established Program in Protein Structure and Design. The academic appointment will be in the Department of Chemistry, with a joint research appointment in the Biophysics Research Division. We seek an individual who will interact with and complement the existing structure group in the Program (S. Krimm, vibrational spectroscopy; M. L. Ludwig, x-ray crystallography; G. Wagner, NMR spectroscopy), and who will develop a strong research program oriented around modern theoretical approaches to analyzing and predicting protein structure and function. Teaching duties will be associated with the physical chemistry cluster in the Department of Chemistry. Interested candidates should send, by 1 March 1987, curriculum vitae documenting qualifications, professional accomplishments, and future plans, together with names and addresses of three references to:

**Professor S. Krimm, Director
Program in Protein Structure and Design
University of Michigan
2200 Bonisteel Boulevard
Ann Arbor, MI 48109**

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

FACULTY POSITION BIOTECHNOLOGY/MOLECULAR BIOLOGY

The Department of Biochemistry at the University of Illinois at Urbana-Champaign invites applications for a tenure-track assistant professorship which will be available in the fall of 1987. Candidates should have demonstrated exceptional research ability in the dynamic areas of biotechnology or molecular biology, be prepared to establish an outstanding research program, and to contribute to graduate and undergraduate teaching efforts. A Ph.D. and postdoctoral experience in biochemistry or related area are required. For full consideration, candidates should submit curriculum vitae, including a brief summary of their research interests and three letters of reference, by 15 February 1987 to:

**Professor Stephen Sligar, Chair
The Biochemistry Search Committee
Department of Biochemistry
University of Illinois
1209 West California
Urbana, IL 61801
Telephone: 217-333-2013**

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

POSITIONS OPEN

ENVIRONMENTAL RESEARCH SCIENTISTS

The Holcomb Research Institute, Butler University, is seeking two research scientists for an expanding study of forest development under stressed conditions. The two positions are: **Forest Development Scientist:** to focus on forest growth analysis, dendrochronology, multi-variable statistical methods, and simulation modeling of forest stand development; **Air Pollution Pathologist:** to address studies of environmental influences on forest growth and the interactions of air pollutants and biotic stress agents. Research on other topics which the individuals will help to define can be included.

Applicants should possess a Ph.D. in plant ecology, plant pathology or forestry, and possess a strong background in field research methods, statistical analysis and scientific writing, including a record of publishing. Responses are invited from individuals currently completing doctoral work or who have up to 10 years of experience in research.

The Holcomb Research Institute is a division of Butler University with broad responsibilities for environmental research. An endowment allows development of independent studies and assures continuity of programs, but much of the research is carried out through external grants and contracts. The two positions are to be filled by 1 April 1987 or shortly thereafter. Appointments are viewed as long-term, although initially they will be for 2 to 4 years, depending on experience. Send letter, including statement of career research interests, resume, and names of three references, by 6 February 1987 to:

**Dr. Orie L. Loucks, Director
Holcomb Research Institute
Butler University
4600 Sunset Avenue
Indianapolis, IN 46208**

An Equal Opportunity and Affirmative Action Employer.

UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA) DIRECTOR, INTERNATIONAL STUDIES AND OVERSEAS PROGRAMS

UCLA seeks a distinguished scholar and experienced administrator with a background of overseas field research and/or international service to direct, coordinate, and strengthen foreign area studies and international programs.

Please send applications, nominations, and inquiries for further information to: **Leonard Binder, Chair, ISOP Search Committee, College of Letters and Science, 1312 Murphy Hall, UCLA, Los Angeles, CA 90024.** *UCLA is an Affirmative Action, Equal Opportunity Employer.*

FACULTY POSITIONS IN PATHOBIOLOGY

The Department of Pathobiology at the University of Washington announces the opening of three faculty positions. Successful candidates will be expected to participate in teaching and precepting graduate students in the department, and will hold a concurrent position at The Biomembrane Institute of Seattle, Washington. Qualifications for each position are listed below:

Assistant or Research Assistant Professor, depending on experience. Applicants must have a Ph.D. and at least 3 years of postdoctoral research experience in cloning genes and expression of oncogenes, and must be capable of performing microinjection into single cells.

Assistant or Research Assistant Professor depending on experience. Applicants must have a Ph.D. and at least 3 years of postdoctoral research experience in cellular immunology or cell biology and developmental biology. The candidate should also have experience/training and be interested in the functional role of cell surface glycoconjugates in response of immune cells, growth regulation, and cell recognition.

Professor. Applicants must have a Ph.D. with at least 10 years of independent research experience in isolation and characterization of glycosyltransferases and hydrolases as related to mechanisms of oncogenesis and infection.

Applicants should send a letter of interest, curriculum vitae, and names and addresses of three references to: **Chair, Search Committee, The Biomembrane Institute, 201 Elliott Avenue West, Suite 305, Seattle, WA 98119.** *The application deadline for all three positions is 10 February 1987.*

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

POSITIONS OPEN

FACULTY POSITION MOLECULAR BIOLOGY

The Department of Microbiology invites applications for a tenure-track position at the junior or senior professional level, depending upon qualifications. Candidates with research interests that complement and extend departmental research in the areas of molecular genetics, animal virology, molecular cell biology, and protein biochemistry are especially encouraged to apply. The successful candidate will be expected to establish a vigorous research program, direct graduate students, and assist in the teaching of medical students. Initial funds for equipment, supplies, and graduate student support are available from the department, the institution, and the Cancer Center. Applicants should send curriculum vitae, a brief statement of future research plans, and names of three references by 15 March 1987 to: **Faculty Search Committee, Department of Microbiology, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226.**

Affirmative Action/Equal Opportunity Employer

FACULTY POSITIONS IN NEUROBIOLOGY UNIVERSITY OF TEXAS MEDICAL SCHOOL AT HOUSTON

The Department of Neurobiology and Anatomy is embarking upon an effort to recruit eight new Faculty members. One focus of the recruiting effort will be in the area of neuronal plasticity with a particular emphasis on learning and memory. Preference will be given to appointments at the level of assistant professor, but some appointments at the level of associate professor will also be considered.

These are tenure-track positions with state-supported hard-money salaries. In addition, exceptional laboratory facilities and start-up funds and highly competitive salaries are available to outstanding individuals who intend to develop a strong, independent research program.

Those who wish to be considered should send curriculum vitae, names of four references, and a brief description of their research interests to: **Dr. John H. Byrne, Chairman, Department of Neurobiology and Anatomy, University of Texas Medical School at Houston, P.O. Box 20708, Houston, TX 77225.**

An Equal Opportunity Employer. Women and minorities are encouraged to apply.

FACULTY POSITION IN MOLECULAR PATHOGENESIS

The Department of Microbiology and Immunology invites applications for a junior- or senior-level, tenure-track position focusing on significant problems in bacterial pathogenesis using genetic and molecular approaches. Senior candidates should have a strong record of research accomplishment with sustained program growth and development. Junior candidates will be expected to develop a strong, independent research program with long-term growth potential. Teaching responsibilities, which emphasize quality rather than quantity, include medical, dental, and graduate students. The University of Tennessee, Memphis, is well into a major growth phase. The department has recently moved into a completely renovated building and will be appointing at least eight new faculty during the next several years. New faculty are also being appointed in the Departments of Pharmacology and Biochemistry. A large Center of Excellence grant has resulted in development of a Molecular Resource Center within the department featuring state-of-the-art facilities for: DNA cloning and sequencing, oligonucleotide synthesis, peptide synthesis, monoclonal antibody production, amino acid analysis, protein sequencing, and flow cytometry. Funds for the initiation of research programs will be available and salaries will be highly competitive. Applications should consist of curriculum vitae, copies of several recent publications, a brief statement of future research goals, and three letters of reference to be sent to: **Dr. Ronald K. Taylor, Department of Microbiology and Immunology, University of Tennessee, Memphis, The Health Science Center, 858 Madison Avenue, Memphis, TN 38163.** Applications will be received until 25 February 1987 or until the position is filled thereafter. *The University of Tennessee is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

FACULTY POSITIONS IN NEUROSCIENCE

Two **TENURE-TRACK POSITIONS AT THE ASSISTANT PROFESSOR LEVEL** are available in the newly formed **Department of Behavioral Neuroscience at the University of Pittsburgh**, to begin September 1987. The research of current faculty members focuses on a variety of areas in neuroscience, including neuroplasticity of catecholaminergic systems, the neurobiological bases of ingestive, reproductive and learned behaviors, mechanisms governing synthesis and release of neurotransmitters and neurohormones, biophysical membrane properties of nerve cells, pharmacological characteristics of retinal neurons, and mathematical modeling of neuronal networks. Applicants from all areas of basic and clinical neuroscience are invited to apply, though special attention will be given to those studying problems at the cellular and molecular levels, including those related to neurotransmitter biosynthesis, receptors and second messenger systems, and ion channels. All applicants should have at least 2 years of postdoctoral experience. Send curriculum vitae, three letters of recommendation and a description of current and future research programs to: **Search Committee, Department of Behavioral Neuroscience, 479 Crawford Hall, University of Pittsburgh, Pittsburgh, PA 15260.**

HUMAN GENETICS AT THE UNIVERSITY OF UTAH

The University of Utah, Department of Human Genetics, would like to fill two faculty positions at the assistant or associate professor level. The department is interested in recruiting investigators who are developing or using molecular genetic approaches in investigations of the molecular and cell biology of mammalian systems. Candidates with a demonstrated research interest in molecular genetic studies using human systems will have the highest priority. The Human Genetics Department at the University of Utah was founded 2 years ago and has excellent resources in molecular biology, *Drosophila* developmental biology and genetics, human gene mapping, genetic epidemiology, population studies, and scientific computing.

Application deadline will be 31 March 1987. Applications submitted after the deadline may be considered if no qualified candidates have applied by the deadline.

Send curriculum vitae and references to: **Dr. Raymond Gesteland, Human Genetics Recruitment Committee, Room 743, Wintrobe Building, University of Utah, Salt Lake City, UT 84132.**

The University of Utah is an Equal Opportunity Employer.

IMMUNOLOGIST/VIROLOGIST

The Muncie Center for Medical Education, a regional center of the Indiana University School of Medicine located on the Ball State University campus, invites applications for a tenure-track position at the level of assistant or associate professor. Postdoctoral experience is preferred. The successful applicant will be expected to establish an independent research program in immunology or virology, and will teach immunology and virology to first-year medical students. Salary is dependent upon experience. Interested persons should submit curriculum vitae, graduate transcripts, a brief summary of current research activities, and three original letters of reference to: **Dr. T. Stuart Walker, Chairman of Search Committee, Center for Medical Education, Ball State University, Muncie, IN 47306.** Applications must be postmarked by 26 January 1987.

Ball State University Practices Equal Opportunity in Education and Employment.

FACULTY OPENINGS AT BERKELEY The University of California, Berkeley

Subject to available funds, the Physics Department is searching for two **tenure-track assistant professors** to be appointed effective 1 July 1987 (one position) and 1 July 1988 (one position). The 1987 position is restricted to experimental astrophysics; the 1988 position is restricted to experimental plasma physics. If it is desirable to bring a successful 1988 appointee to Berkeley prior to the appointment date, means to arrange an interim research appointment will be explored. Applicants should send a curriculum vitae, bibliography, statement of research interests, and the names of three references to: **Professor P. Buford Price, Chairman, Department of Physics, University of California, Berkeley, CA 94720, before 1 March 1987.** *The University of California is an Equal Opportunity, Affirmative Action Employer.*

POSITIONS OPEN

FACULTY POSITION IN STRUCTURAL STUDIES

The Section of Biochemistry, Molecular and Cell Biology, Cornell University seeks applicants for a tenured or tenure-track position (level determined by candidate's qualifications and experience) in the broad area of structural studies (x-ray crystallography and image reconstruction of proteins and nucleic acids preferred). Starting between September 1987 and September 1988. Applicants must have a Ph.D., 2 years of postdoctoral experience, and demonstrated excellence in their areas of research. The candidate chosen is expected to initiate an innovative research program and contribute to the teaching program.

Send curriculum vitae and summary of research plans and have three letters of recommendation sent, by 31 March 1987, to: **Professor George P. Hess, Search Committee, 254 Clark Hall, Cornell University, Ithaca, NY 14853.**

Cornell is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITION IN PHARMACY at the University of California, San Francisco

An outstanding biomedical scientist is sought to assume a position as an **Assistant Professor-in-Residence in the Department of Pharmacy at the University of California, San Francisco (UCSF).** The appointee will have service responsibilities in the Drug Studies Unit, a clinical research facility within the School of Pharmacy. These responsibilities include the coordination of scientific aspects of experimental design, clinical procedure, assay, data analysis, interpretation and documentation for the clinical pharmacology/pharmacokinetic studies undertaken by the Unit. In addition, the appointee will establish a sound independent research program in areas of interest which might include clinical pharmacology, pharmacokinetic/pharmacodynamic modeling and/or data analysis and will teach both professional and graduate students. Applicants should have a Ph.D., M.D., or equivalent degree with a background in the general principles of scientific methodology, pharmacology, clinical procedures, assay methodology, pharmacokinetics, and statistics. Curriculum vitae, the names of three referees, and a summary of current and planned research interests should be sent by 1 March 1987 to: **Robert A. Upton, Ph.D., Department of Pharmacy, S-926, University of California, San Francisco, CA 94143-0446.** *UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are encouraged to apply.*

IMMUNOLOGIST

Tenure-track assistant professor in the Department of Life Sciences. Ph.D. with 2 years of postdoctoral experience required. The candidate is expected to establish a research program and participate in undergraduate and graduate teaching. While applicants trained in any area of immunology will be considered, individuals with expertise in molecular immunology, immunogenetics, and mechanism of pathogenesis or immunoregulation are encouraged to apply. Position available September 1987. Submit letter outlining research and teaching interest, curriculum vitae, bibliography, and three reference letters to: **Dr. William J. Brett, Chairman, Department of Life Sciences, Indiana State University, Terre Haute, IN 47809, by 15 February 1987.** *Indiana State University is an Equal Opportunity/Affirmative Action Employer.*

JUNIOR FACULTY POSITION IN ENVIRONMENTAL CHEMISTRY

Applications are invited for a junior faculty position in environmental chemistry. Applicants should have interest and ability in undergraduate and graduate teaching, and a vigorous, innovative research program in atmospheric and/or aquatic chemistry. Examples of suitable areas of pure and applied research include: experiments on and/or modeling of complex photochemical systems; chemical interactions in environmentally important liquids, gases, and aerosols; and chemistry of the global and/or urban environments. Applicants should submit curriculum vitae, list of publications, statement of research interests, and the names of three references to: **The Environmental Chemistry Search Committee, c/o Dean Paul C. Martin, Pierce Hall 217a, Harvard University, Cambridge, MA 02138.** *Applications from women and minority group members are especially encouraged. Harvard University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CENTER FOR GENE STRUCTURE AND FUNCTION IMMUNOLOGIST

Applicants are sought for a position in a Center for Gene Structure and Function recently established by the RCMI Program of the NIH and Hunter College. The appointee will hold a tenure-track position in the Department of Biological Sciences at the appropriate professorial level, and is expected to establish an independent research program and to participate in team-taught courses in his or her area of expertise at the undergraduate and/or graduate level. Send curriculum vitae, future research interests, and names of three references to:

Professor Harvey L. Ozer
Program Coordinator
Center for Gene Structure and Function
Hunter College
City University of New York
New York, NY 10021

An Equal Opportunity/Affirmative Action Employer. Minority candidates are encouraged to apply.

LABORATORY TECHNOLOGIST—One-year job experience with tissue processing and documentation for light and electron microscopy, basic skills and cytochemistry and tissue culture, planning and conduction of animal and in vitro experiments; documented teaching skills and knowledge of normal and pathological ultrastructure of the cell. Master's degree in biological science related field is required. Deadline for submission, 1 February 1987. Submit curriculum vitae and two references to: **University of Tennessee Employment Service, 804 Volunteer Boulevard, Knoxville, TN 37996.** *University of Tennessee, Knoxville, is an Equal Employment Opportunity/Affirmative Action/Title XI/Section 504 Employer.*

MANAGER FOR NMR IMAGING AND SPECTROSCOPY

The Pittsburgh NMR Center for Biomedical Research [under the auspices of Carnegie-Mellon University (CMU) and the University of Pittsburgh (Pitt)] is looking for an operations manager. The center has a Bruker 4.7-T NMR system with a 40-cm bore-size superconducting magnet for multinuclear NMR imaging and in vivo spectroscopic studies using animal models. This facility is housed in the Mellon Institute and has additional facilities for high-speed computing, the building and maintaining of electronics equipment, surgery, and the housing of animals. The operations manager should have a Ph.D. in physics or chemistry or the equivalent experience, a good knowledge of NMR theory and techniques and their application to NMR imaging and to biomedical science. Especially desirable would be previous experience with Bruker NMR spectrometers and imagers, and previous managerial experience in a University environment. The manager will supervise several NMR spectroscopists and an electronics engineer, and should have good communication skills to interact with users of the facility (M.D.s, biologists, chemists, physicists, engineers, and computer scientists) as well as participating in the teaching of the use of the Center's NMR instrument and the application of NMR to biomedical sciences. This is a staff appointment and salary depends on experience and qualifications. Interested persons should send curriculum vitae and the names of two or three references to: **Ms. Cynthia J. Davis, Pittsburgh NMR Center for Biomedical Research, Mellon Institute, Carnegie-Mellon University, 4400 Fifth Avenue, Pittsburgh, PA 15213.** All applications should be submitted by 28 February 1987. *CMU and Pitt are Affirmative Action/Equal Opportunity Employers.*

MANAGER OF OPERATIONS—NMR Facility—Scheduling users and accounting for instrument time, training new users in the theory and operation of the 620-MHz NMR spectrometer, performing measurements and interpretation of high-field spectra for users who do not themselves come to the laboratory, and performance of core research on new instrumentation and methodology, particularly the investigation of transverse Overhauser effects, and of the effects of molecular orientation in liquids and gases by the high magnetic field. Ph.D. in physics or chemistry and experience with high-field nuclear magnetic resonance instrumentation required. \$25,000 per year. Send résumé to: **Joseph Napper, Office of Employment Security, 6206 Broad Street, Pittsburgh, PA 15206.** Refer to Job Order No. 4073507.

Assistant Director Cardiovascular Pharmacology



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employer

Pfizer Inc. is internationally recognized for innovations and research achievements in the healthcare field. New and ongoing projects in our New York headquarters office have created excellent opportunities for high caliber clinical research professionals to join multidisciplinary drug development teams in the Cardiovascular Pharmacology area.

You will be responsible for both preclinical and clinical Cardiovascular Pharmacology. Will also develop clinical research programs to evaluate the efficacy and safety of potential new drug candidates. Requires a PhD in Pharmacology in the Cardiovascular area with at least 3 years post-doctoral experience. Clinical research experience is highly desirable. Candidates should be self-motivated with excellent interpersonal, analytical, organizational and communication skills.

Explore your exceptional career prospects with Pfizer that include competitive salaries commensurate with experience, outstanding benefits and ample opportunities for professional growth. Send your resume with salary history, to: **Cathlin L. Green, Sr. Personnel Associate, Human Resources, Pfizer Inc., 235 East 42nd Street, New York, NY 10017.** Only candidates with appropriate backgrounds will be contacted.

Senior Scientists

Explore A Position Today With The Industry Of The Future.

The Agricultural Division of CIBA-GEIGY, one of the world's foremost agricultural and specialty chemicals companies, is respected for both the quality of its research and the highly accomplished scientists it attracts. To maintain our leadership position in plant biotechnology, we currently seek Senior Scientists to support our program in plant genetic engineering and crop improvement.

We have two positions available in our **Plant Tissue Culture** group. Successful candidates will have a PhD in botany, cell biology, genetics, or plant biochemistry and several years of research experience, including at least two years' postdoctoral work. Preference will be given to candidates with extensive experience in plant tissue culture technologies, particularly with crop plants.

A third position is available in **Plant Genetic Engineering**. The successful candidate will have a PhD in biology, biochemistry, genetics, molecular biology or a related discipline, and at least two years' postdoctoral work experience. Relevant research experience includes the design of transformation vectors, tailoring genes for successful expression, designing plant transformation strategies, and molecular, genetic and phenotypic analysis of transgenic plant material.

In return for your expertise, you will receive an excellent salary and benefits package and the opportunity to contribute to an innovative research program. If you are interested in joining our Research Triangle Park, North Carolina facility, forward your curriculum vitae and publications list to: **Dr. Mary-Dell Chilton, CIBA-GEIGY Biotechnology Research, P.O. Box 12257, Research Triangle Park, North Carolina 27709.** An Equal Opportunity Employer m/f/h/v.

Science Serving Mankind

CIBA-GEIGY

POSITIONS OPEN

MAYTAG FELLOW IN ZOOLOGY ARIZONA STATE UNIVERSITY

One-year appointment for collaborative research with a faculty member in the Department of Zoology. Intended for postdoctoral students; exceptional senior faculty on sabbatical leave will also be considered. Application must be coordinated through a faculty member with compatible interests. The department has vigorous research programs in behavior, ecology, and evolution; physiology and neurobiology, genetics, cell and developmental biology. Salary competitive with NIH fellowships; starting date 15 August 1987.

Appointment shared between two individuals will be considered. Review of applications will begin 28 January 1987. For more information: **Chairperson, Department of Zoology, Arizona State University, Tempe, AZ 85287. Arizona State University is an Affirmative Action/Equal Opportunity Employer.**

MEDICAL ONCOLOGIST with substantial research interests will collaborate with strong university basic science programs in cell biology, imaging, and immunology to develop creative diagnostic and therapeutic trials. Close affiliations with national laboratories offer unique opportunities in marrow transplantations, diagnosis, and cancer biology. With a tenure-track position at the assistant professor level, this individual will be expected to establish own research program. Send curriculum vitae, statement of research interests and goals, and representative reprints to: **James Neidhart, M.D., Director, Cancer Center, University of New Mexico, Albuquerque, NM 87131. Affirmative Action/Equal Opportunity Employer.**

MICROBIAL ECOLOGIST

Applications are solicited for a tenure-track position at the rank of assistant/associate professor in the Department of Biology. The successful candidate will be encouraged to interact with an interdisciplinary group of scientists with interests in estuarine processes. Candidates who are able to apply molecular biological techniques to problems of microbial ecology are especially encouraged to apply. Send, by 16 February 1987, curriculum vitae, statement of research interests, reprints of recent publications, and arrange for three letters of reference to be sent to: **Dr. B. C. Coull, Department of Biology, University of South Carolina, Columbia, South Carolina 29208. The University of South Carolina is an Affirmative Action, Equal Opportunity Employer.**

MOLECULAR BIOLOGIST

The Department of Zoology at Miami University anticipates making a tenure-track, assistant professor appointment on the Oxford Campus effective August 1987. We seek a **molecular biologist** trained in cellular/developmental biology or genetics with research interests in embryonic cell interactions or genetic control of development. The person must be able to teach courses in development and genetics. She/he will be expected to engage significantly in research, to compete successfully for external research funding and to effectively teach at all levels of instruction. The Department has 30 faculty and offers B.S., M.S., and Ph.D. programs. It occupies new, well-equipped facilities. A Ph.D. is required; postdoctoral training and teaching experience are assets. Applications must be completed by 16 February 1987. An application consists of a résumé, transcripts of all academic work and three letters of reference; send application materials to: **R. G. Sherman, Department of Zoology, Miami University, Oxford, OH 45056. Minorities and women candidates are strongly encouraged to apply. Miami University is making every effort to create a diverse, heterogeneous faculty and staff.**

MOLECULAR BIOLOGIST. Warren Wilson College, a small liberal arts college on 1100 acres in Blue Ridge Mountains near Asheville, NC, seeks Ph.D. with proven teaching ability and research potential. Well equipped research lab. Teaching will include genetics, physiology, biochemistry, and microbiology. Submit curriculum vitae and three supporting letters to: **Dr. Paul Bartels, Department of Biology, Box 5032, Warren Wilson College, 701 Warren Wilson Road, Swannanoa, NC 28778. Equal Opportunity Employer. Deadline 1 March 1987.**

POSITIONS OPEN

The Department of Biology of Villanova University is seeking interested candidates to fill a **tenure-track position at the assistant professor level for fall 1987. MOLECULAR BIOLOGIST.** Teaching duties will include graduate courses in virology and molecular immunology. The successful candidate is also expected to participate in appropriate undergraduate courses. A Ph.D. and postdoctoral experience are required. Candidates are expected to develop a research program with potential for extramural support, participate actively in departmental affairs, and exhibit a personal concern for students. Applicants should send transcripts of undergraduate and graduate work, curriculum vitae, a brief statement of research and teaching goals, and the names and addresses of three referees. Candidates should also arrange for letters of reference to be sent by the application deadline. Submit all materials by 23 January 1987 to: **Dr. Joseph A. J. Orkwiszewski, Chair, Department of Biology, Villanova University, Villanova, PA 19085. Villanova University is an Affirmative Action/Equal Educational Institution. Women and minorities are especially encouraged to apply.**

TEMPLE UNIVERSITY DEPARTMENT OF BIOLOGY MOLECULAR BIOLOGY AND GENETICS

The Department of Biology is seeking candidates for **faculty appointments in molecular biology and genetics.** The positions available are in the areas of gene expression in prokaryotes and viruses and gene action in relation to problems in developmental biology, cell biology, and neurobiology. Successful candidates will also hold appointments in the University's Institute of Molecular Biology and Genetics.

The department invites applications for these tenure-track appointments which will be effective for the academic year 1987-88. All candidates are expected to have postdoctoral experience. Faculty appointed to these positions will maintain independent research programs, interact with existing faculty in the department and contribute to both graduate and undergraduate education in their areas of specialization. Please send curriculum vitae, copies of representative publications, a summary of previous and proposed research, and the names and addresses of three references to: **Dr. Ralph Hillman, Chairman, Department of Biology, 015-00; Temple University, Philadelphia, PA 19122.** Closing date for application is 15 February 1987. Applications will be reviewed upon receipt.

Temple University is an Equal Opportunity/Affirmative Action Employer.

MOLECULAR BIOLOGIST Bacterial Genetics Group Advanced Genetic Sciences, Inc. 6701 San Pablo Avenue Oakland, CA 94608

Research directed towards an understanding of bacterial ice nucleation. For background see *Nucl. Acids Res.* **14**, 8047, *PNAS* **83**, 7256, *EMBO J.* **5**, 231. Applicants should hold a Ph.D. in a branch of molecular biology, or have equivalent postdoctoral experience. Salary and level of appointment commensurate with experience. Send curriculum vitae and names, addresses and phone numbers of three referees to: **Dr. Gareth Warren** at the above address.

MOLECULAR EVOLUTIONARY BIOLOGIST

Assistant professor position anticipated for fall 1987 at a comprehensive university of 25,000 students, located in a pleasant community 60 miles west of Chicago. A Ph.D. and postdoctoral experience are required. The successful candidate will be expected to maintain a vigorous research program, direct graduate (M.S. and Ph.D.) students and teach the equivalent of one course per semester.

MOLECULAR EVOLUTIONARY BIOLOGIST: To teach courses in evolutionary biology and to participate occasionally in either a Fundamentals of Biology course or other introductory courses. The successful candidate will be expected to use modern molecular techniques in the study of macroevolutionary processes. Send curriculum vitae, statement of research goals, and three letters of reference by 15 February 1987 to: **Dr. Marvin J. Starzyk, Chairman, Department of Biological Sciences, Northern Illinois University, DeKalb, IL 60115-2861. Telephone: 815-753-1753. The University is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

MOLECULAR VIROLOGIST

The Oregon Regional Primate Research Center has an opening for a Ph.D. virologist with training and experience in molecular biology. The core-funded appointee will interact with two pathologists, two immunologists, and clinical veterinarians studying immunocompromising retrovirus infections endemic in several primate species and will be expected to develop an active research program, which need not be limited to retroviruses. The appointee will assist in the management of viral diseases in the animal colonies. Joint academic opportunities are available at the nearby Oregon Health Sciences University, Portland, Oregon. The level of appointment will be contingent on the applicant's qualifications, with advanced levels requiring a strong record of publication and grant support. Applicants should submit curriculum vitae and four professional references by 1 March 1987 to: **Wilbur P. McNulty, M.D., Chair, Search Committee, Oregon Regional Primate Research Center, 505 NW 185th Avenue, Beaverton, OR 97006. Telephone: 1-503-645-1141. The Oregon Regional Primate Research Center is an Equal Opportunity/Affirmative Action Employer.**

MOLECULAR EVOLUTIONARY BIOLOGY

The Department of Biological Sciences of the University of Cincinnati invites applications for a **tenure-track assistant professor** in the area of **molecular evolutionary biology**, beginning 1 September 1987. We are seeking candidates who are using modern, molecular techniques to address important questions in evolutionary biology. The successful candidate will be expected to develop a vigorous, externally funded research program, train graduate students and teach advanced courses in evolutionary biology. The candidate must have a doctoral degree, with postdoctoral experience preferred. Candidates should submit a letter of application describing their research background, interests and future plans, a current curriculum vitae and three letters of reference to: **Dr. J. Robie Vestal, Chairman, Molecular Evolutionary Biology Search Committee, Department of Biological Sciences, University of Cincinnati, OH 45221-0006 by 15 February 1987. The University of Cincinnati is an Equal Opportunity/Affirmative Action Employer.**

MOLECULAR/CELLULAR NEUROBIOLOGIST

Newly formed group working on fundamental issues in olfaction and taste seeks established neurobiologist studying molecular/cellular bases of neural development, organization and/or function. The successful candidate need not have an established background in chemosensory neuroscience, but should indicate how his/her approaches would complement existing research programs. Current programs include developmental chemical neuroanatomy, transplantation, cellular biophysics, cell surface immunology, integrative neurophysiology, and sensory evaluation. Excellent resources exist, including large-scale image analysis system, EM, and tissue culture facilities.

This is a tenure-track position in the Department of Anatomy and Cell Biology and significant space and start-up funds are available. Teaching responsibilities are in team-taught medical neuroscience and graduate neurobiology courses. Appointment at appropriate rank can be made immediately.

Interested candidates should send curriculum vitae, letter of research goals and the names of four individuals who may be contacted for letters of recommendation to: **M. T. Shipley, Neurobiology Search Committee, Department of Anatomy and Cell Biology, Division of Neurobiology, M.L. #521, University of Cincinnati College of Medicine, Cincinnati, OH 45267.**

NATURAL SCIENTIST/COMPUTER RESOURCE PERSON: Permanent, full-time position starting August 1987 teaching introductory computer courses on existing micros (Apples); courses complementary to existing ecology, forestry, and wildlife programs; and acting as a computer resource person. Send curriculum vitae, letter of interests, and names and telephone numbers of three references by 1 February 1987 to: **Ms. Susan Gawler, Center of Environmental Sciences, Unity College, Unity, MA 04988; Telephone: 207-948-3131. An Equal Opportunity Employer.**

Associate Director Molecular Biology

Prominent East coast pharmaceutical company is seeking an experienced and talented scientist to accept the responsibility for leading a group of 8 to 10 molecular biologists in a research environment.

The selected candidate must possess experience in several of the following areas: cDNA cloning and expression, assembly of synthetic genes, analysis of a variety of eukaryotic and prokaryotic proteins, virology, gene expression in a variety of host systems, especially (but not exclusively) microbial systems, regulation of gene expression, fermentation microbiology and structure/function studies of proteins. An excellent publication record and extensive supervisory experience in molecular biology are required. Strong leadership and communication skills are very important. Industrial experience is a plus.

This position will provide an excellent opportunity to implement novel research ideas and to develop the talents of other staff scientists. The successful candidate would be expected to have the capability to expand his/her future responsibilities.

The compensation plan, benefits program and relocation entitlements for this position are excellent.

If interested, please send curriculum vitae and salary history to:

**F.D., P.O. Box 2059
Philadelphia, PA 19103**

Equal Opportunity Employer, M/F

TOXICOLOGIST Toxicology Studies

LILLY RESEARCH LABORATORIES, a division of Eli Lilly and Company, is seeking candidates for a position in the Toxicology Division. Applicants must have a Bachelor Degree or Masters Degree in pharmacy, pharmaceutical science, or pharmacology. Practical laboratory experience is desirable. Candidates must possess good problem solving and communication skills.

The primary responsibilities will involve formulation development of dosage forms for use in pre-clinical toxicology studies, report preparation, close interaction with analytical groups within the company for scheduling and collecting required analytical data in support of toxicology studies, and potential supervision of technical staff.

Qualified applicants should send their resume to:



Ms. Lori E. Pivo
Personnel Department, GB961
Eli Lilly and Company
Greenfield Laboratories
P. O. Box 708
Greenfield, Indiana 46140

Equal Opportunity Employer

Repligen Corporation

Repligen Corporation is a biotechnology company that develops and produces biochemical and biocatalytic products for the health care, personal care, and industrial markets. Highly motivated scientists are being sought for the following positions:

Principal Investigators

Immunology—Molecular or cellular immunologist to develop immunoactive proteins for therapeutic applications.

Virology—Experience in mammalian virology, particularly human retrovirology and viral vaccine and diagnostic development.

Molecular Biology—Experience in cDNA cloning and mammalian cell expression systems.

Dermatology—A strong cell biology background with experience in therapeutic dermatology.

Qualified individuals will have a Ph.D. or M.D. degree, with at least five years post-doctoral experience. Successful candidates will possess an exceptional record of achievement and have proven program management skills.

Research Scientists and Research Associates

Molecular Biology—cDNA cloning and gene expression.

Protein Chemistry—Protein purification, enzymology, and affinity chromatography.

Immunology—Molecular or cellular immunology

Cell Biology—Eucaryotic gene expression systems, tissue culture and monoclonal antibody development.

Research Scientists will possess a Ph.D. degree with post-doctoral experience. Successful candidates will have proven records of research achievement and the motivation which will allow them to take advantage of the growth opportunities available at Repligen.

Research Associates will have a M.S./B.S. with at least two years laboratory experience. For highly motivated candidates these positions offer the opportunity to expand his or her technical expertise into diverse areas of biotechnology.

Repligen offers competitive salaries, excellent benefits, and equity participation. Submit cover letter, resume, and a reference list to: **Personnel Manager, Repligen Corporation, One Kendall Square, Building 700, Cambridge, Massachusetts 02139.**

RepliGen

An equal opportunity employer.

POSITIONS OPEN

NEUROPSYCHOLOGIST FACULTY POSITION

The Division of Medical Psychology, Department of Psychiatry, of Duke University Medical Center is recruiting a neuropsychologist with both clinical and research interests in Alzheimer's disease and dementia. This person needs to be a trained clinical neuropsychologist and preferably a diplomate in clinical neuropsychology from the American Board of Professional Psychology. The person also needs to have an active research program in an aspect of brain behavior relationships pertinent to dementia that serves to guide his/her clinical assessment and/or rehabilitation activities. This person will be expected to engage in neuropsychological clinical and research activities and to collaborate with clinicians and researchers from other biomedical disciplines in the study of data on patients seen in the Alzheimer's Center. Furthermore, there are opportunities for collaboration with faculty and programs of the Center for the Study of Aging and Human Development, the Departments of Psychiatry and Radiology, and an emerging program in neurosciences.

Rank and salary are commensurate with qualifications. Applicants should send a letter outlining their clinical and research interest, curriculum vitae, and three letters of reference to: **Robert J. Thompson, Jr., Ph.D., Professor and Head, Division of Medical Psychology, P.O. Box 3362, Duke University Medical Center, Durham, NC 27710. Duke University is an Equal Opportunity Employer.**

POSTDOCTORAL FELLOW

Developmental regulation of expression and glycosylation of African trypanosome membrane proteins. Experience isolating and characterizing genes from expression libraries and using antibodies for screening and Western blots. Send curriculum vitae and three recommendations to: **Dr. A. E. Balber, Duke University Medical Center, Division of Immunology, P.O. Box 3010, Durham, NC 27710.**

An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

NEUROBIOLOGY POSITION available, postdoctoral fellow or research associate level in **Department of Neurology, Yale Medical School.** Incumbent will join multidisciplinary group studying development and pathophysiology of axons with emphasis on membrane differentiation, ion channel organization and cell-cell interactions in PNS and CNS. Applicants should have experience in immunocytochemistry, monoclonal antibody technology and/or tissue culture. Experience in ultrastructure and/or electrophysiology would be helpful. Ample opportunity for interaction with workers using morphological, immunological, electrophysiological, and biophysical methods to study neural plasticity. Curriculum vitae and three letters of reference to: **Stephen G. Waxman, M.D., Ph.D., Chairman, Department of Neurology, Yale Medical School, LC1708, 333 Cedar Street, New Haven, CT 06510. Equal Opportunity/Affirmative Action Employer.**

Ph.D. BIOCHEMIST WITH NMR SPECTROSCOPY EXPERIENCE—Position heading basic science research section (MRS) in Diagnostic Radiology Department of a 490-bed teaching hospital affiliated with Harvard Medical School. Prefer broad experience in molecular biology. Send curriculum vitae and references to: **Melvin E. Clouse, M.D., Chairman, Department of Radiology, New England Deaconess Hospital, 185 Pilgrim Road, Boston, MA 02215.**

PHYSICIST: Career position, applied research, development, production; basic and high stability frequency and time standards. Good theoretical background and laboratory expertise atomic and molecular beams, electronics dc to microwave, analog and digital systems. Ph.D. or exceptional master's degree with supervisory and management potential. Send curriculum vitae to: **Sigma Tau Standards Corporation, P.O. Box 1877, Tuscaloosa, AL 35403. An Equal Opportunity Employer.**

POSTDOCTORAL FELLOW. Biochemistry/cell biology, with interest in the characterization of peptide hormone receptors at the molecular level. Interaction in active peptide chemistry laboratory and multidisciplinary gastrointestinal research group. Send curriculum vitae and names of three references to: **Dr. S. P. Powers, Mayo Medical School, Rochester, MN 55905. An Equal Opportunity/Affirmative Action Institution.**

POSITIONS OPEN

PLANT PATHOLOGIST—assistant professor, tenure-track. Must have Ph.D. Initial responsibility to teach undergraduate and graduate botany courses and to develop a course in plant pathology. Expertise in the area of mycology and/or phycology is desirable. The applicant should be willing to supervise undergraduate/graduate research. Expected starting date: fall 1987. Send a letter of application, curriculum vitae, transcripts of all undergraduate and graduate work, and three (3) letters of recommendation to: **Robert G. Sagar, Chairman, Search and Screen Committee, Department of Biological/Allied Health Sciences, Bloomsburg University, Bloomsburg, PA 17815.** All materials must reach the committee by 1 March 1987. Our department emphasizes excellence in teaching. *An Equal Opportunity/Affirmative Action Employer. Blacks, Hispanics, women and all other protected classes are encouraged to apply.*

PHYSIOLOGY FACULTY POSITION WEST VIRGINIA UNIVERSITY SCHOOL OF MEDICINE

Tenure-track position available 1 July 1987, to be filled at the level of assistant or associate professor. Candidates for assistant professorship must have postdoctoral research experience and be able to develop a strong independent research program. Candidates for associate professorship must have established research program with extramural funding. Responsibilities include teaching of graduate and professional students in the health sciences. Deadline for receipt of all application materials is 16 February 1987. Send curriculum vitae, brief description of research interests, and three letters of reference to: **Dr. George A. Hedge, Professor and Chairman, Department of Physiology, West Virginia University Medical Center, Morgantown, WV 26506. Women and minorities are encouraged to apply.**

PHYSIOLOGY CHAIRPERSON—Associate or full professor. Ph.D. in physiology or M.D. Distinguished research-teaching record, preferably in a medical school. Administrative experience, good verbal communication in English. Knowledge of Spanish desirable. Starting date open. Send résumé, three references by 31 January 1987 to: **Vice-President, Ponce School of Medicine, Box 7004, Ponce, Puerto Rico 00732. Telephone: 809-840-2551. Equal Opportunity Employer.**

HOFFMANN-LA ROCHE

Ph.D. Virologist

As an international leader in pharmaceutical innovation, Hoffmann-LaRoche is at the forefront of developments in new drugs to combat influenza and human immunodeficiency viruses. We currently seek an individual with postdoctoral experience in viral protein biochemistry or enzymology to join our project team in this exciting area.

Working with professionals who share your commitment to drug discovery, you will develop virus-free *in vitro* assays for use in evaluating antiviral compounds. Your responsibilities will also include supervision of routine execution of the assays and research to identify new virus functions as targets for directed antiviral chemotherapy.

We offer the excellent salary and benefits package you would expect as a distinguished professional. For prompt, confidential consideration, forward your resume to: Mrs. Eleanor M. Malone, Professional Staffing Specialist.



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G.D. Searle & Company Research & Development Division has an immediate opportunity for a Research Biochemist in our Gastrointestinal Discovery Function.

The ideal candidate will have a B.S. or an M.S. in Biochemistry or related science with 1-5 years experience in receptor-ligand interactions, cell isolation assays, purification and characterization of enzymes and/or other biochemical studies involving isolated cells and tissues. Experience in prostaglandin or leukotriene receptor biochemistry or pharmacology is a plus.

If you are seeking a challenging and rewarding environment, continuous professional growth with excellent benefits, please submit your resume to:

Sheila Copeland #60J-5Z
Searle R & D
4901 Searle Pkwy.
Skokie, IL 60077

Equal Opportunity Employer

SEARLE

INVITRON

Chemists

PROTEIN CHEMISTS

Invitron Corporation is establishing a protein chemistry research group within our Redwood City, CA research facility. We have immediate needs for the following positions:

A PhD or equivalent technical experience in protein sequencing with some experience in oligonucleotide and peptide synthesis desirable. Background should include sample preparation techniques such as traditional and microbore HPLC and electroelution. Prior experience using Applied Biosystems Gas-Phase Sequencer is a must.

A PhD protein chemist with experience in protein characterization and structural analysis. General experience should include HPLC, electrophoresis, enzyme kinetics, etc.

BS or MS technician level experience in protein purification, enzyme assays, immunoassays etc.

For immediate consideration for these position openings please submit your resume to:



Mike Harris
INVITRON CORPORATION
8000 Maryland Ave.
Suite 860
St. Louis, MO 63105

An Equal Opportunity Employer

Biological

TISSUE CULTURE

Sigma Chemical Company, an international supplier of laboratory biochemicals is seeking qualified individuals to join our Tissue Culture Department. The successful candidate will have a BS/MS in Biology or Microbiology and experience in traditional tissue culture methods. The position requires the ability to do independent work as well as strong written and verbal communication skills. Full company paid benefits. Send resume in confidence to:

Personnel Manager
SIGMA CHEMICAL COMPANY
P.O. Box 14508
St. Louis, MO 63178

Equal Opportunity Employer, M/F

Research Scientists/ Research Associates

Triton Biosciences Inc., an entrepreneurial subsidiary of Shell Oil Company, is an emerging force in the development of diagnostic and therapeutic products for human health care. Our Company is built upon a strong base of research expertise, solid support and responsive management.

Excellent opportunities exist for innovative researchers in our Protein Chemistry and Chemical Development departments. Qualified candidates for the Research Scientist positions will have a PhD and at least 3-5 years of combined post-doctoral studies and/or industrial experience. Qualified candidates for the Research Associate positions will have a BS or MS degree and at least 3 years of research experience.

Research Scientist — Protein Chemistry

You will develop and execute projects on the modelling of three-dimensional structures of peptides and proteins using the techniques of molecular mechanics and dynamics. In addition to a strong background in biochemistry and demonstrated accomplishments in molecular recognition or analog design, a working knowledge of DEC-VAX systems and E&S graphics devices is essential. (Refer to PCS)

Research Associate — Protein Chemistry

You will design and carry out experiments on the purification and microsequencing of natural and recombinant proteins. You should possess strong skills in all aspects of protein purification and analysis including HPLC. Experience in gas-phase microsequencing is highly desirable. (Refer to PCA)

Research Scientist — Chemical Development

You will join a newly-formed team expected to design and execute projects on the scale-up of protein purification processes. In addition to a strong background in biochemistry, you should have a good working knowledge of modern techniques in protein purifications and analysis, including HPLC. Prior experience in the large scale purification of proteins is preferred. (Refer to CDS)

Research Associate — Chemical Development

You will be expected to design and carry out experiments of scaling-up the purification of proteins. You should possess strong skills in all areas of protein purification and analysis including a good working knowledge of HPLC. (Refer to CDA)

Triton is located in the San Francisco Bay Area and offers competitive salary & benefits, including relocation assistance. For prompt consideration please forward your C.V. along with salary requirements to Triton Biosciences Inc., Attn: Employee Relations, 1501 Harbor Bay Parkway, Alameda, CA 94501. All candidates must have U.S. citizenship or permanent resident visa status. Triton is an Equal Opportunity Employer.



Triton Biosciences Inc.

POSITIONS OPEN

The Departments of Ophthalmology and Anatomy of Thomas Jefferson University are seeking an individual at the junior or senior level for a joint appointment to these departments. Applicants should have postdoctoral training and a demonstrable ability to establish a strong and creative research program in some area of **ocular or visual biology**, including but not limited to areas of embryology, cell biology, biochemistry, physiology, or motor control. The appointee will also be expected to interact with the clinical faculty and to participate in teaching of graduate and medical students. Interested applicants should send curriculum vitae, statement of research plans and objectives, and three letters of reference to: **Dr. Gerald Grunwald, Search Committee Chairman, Department of Anatomy, Thomas Jefferson University, 1020 Locust Street, Philadelphia, PA 19107.**

The Institute of Ecosystem Studies of the New York Botanical Garden is accepting applications for a **postdoctoral associate** to participate in a study of tree invasion of shrub and herb communities along utility rights-of-way. Background in experimental approaches to plant-plant, plant-environment, or plant-animal interactions in shrub or herbaceous communities is desired. Applicants should send a letter describing research interests, curriculum vitae, and the names of three references by 1 February 1987 to: **Dr. C. D. Canham, Institute of Ecosystem Studies, Box AB, Millbrook, New York, NY 12545. An Equal Opportunity Employer.**

POSTDOCTORAL: Biochemical and NMR studies related to methionine dependence in tumor cells. Experience in cell culture and/or biological NMR desirable. Applicants should submit a résumé and arrange for three letters of recommendation to be sent to: **Dr. Ted T. Sakai, Comprehensive Cancer Center, Room B31-CHSB, University of Alabama at Birmingham, Birmingham, AL 35294. Affirmative Action/Equal Opportunity Employer.**

NMR POSTDOCTORAL FELLOW. Position available in vivo NMR spectroscopy of tumors and other tissues. Interested candidates should contact:

Jerry D. Glickson, Ph.D.
Director of NMR Research
The Johns Hopkins University School of Medicine
310 Traylor Building
Baltimore, MD 21205

POSTDOCTORAL FELLOW. A position is available for a Ph.D. in biochemistry to study hormonal effects on hepatic Ca^{2+} fluxes, regulation of metabolism and the role of the hepatic microsomal Ca^{2+} ATPase and mitochondria in these processes. Methods will involve membrane biochemistry, protein biochemistry, studies with perfused liver, isolated hepatocytes and subcellular fractions. Send letter and résumé to: **Dr. N. Kraus-Friedmann, Department of Physiology and Cell Biology, University of Texas Medical School, P.O. Box 20708, Houston, TX 77225. An Equal Opportunity Employer. Women and minorities are encouraged to apply.**

POSTDOCTORAL FELLOW. Postdoctoral research associate in electrophysiology and immunocytochemistry to participate in independent and collaborative research with respiratory and neuropharmacology groups. Studies designed to examine sensory function of medullary respiratory centers in tissue explants and dissociated cell cultures. Should be experienced in extracellular or intracellular recording techniques. Send curriculum vitae and list of references to: **Dr. Judith Neubauer, Department of Medicine or Herbert Geller, Department of Pharmacology, University of Medicine and Dentistry of New Jersey—Robert Wood Johnson Medical School, 675 Hoes Lane, Piscataway, NJ 08854-5635. An Equal Opportunity/Affirmative Action Employer M/F/H/V.**

POSTDOCTORAL POSITION: A postdoctoral to cooperate in studies of the subcellular compartmentation of the gibberellin pathway and in characterization of compounds associated with infection by the fungus *Fusarium oxysporum* f. sp. *apii*. Experience with characterization of natural compounds is essential; some synthesis is involved. Available immediately. Please send curriculum vitae and three references to: **Dr. Lawrence Rappaport, Plant Growth Laboratory, University of California, Davis, CA 95616.**

POSITIONS OPEN

POSTDOCTORAL OPPORTUNITIES IN BIOLOGY INDIANA UNIVERSITY—BLOOMINGTON

The Department of Biology and the Institute for Molecular and Cellular Biology regularly have openings for postdoctoral fellows to work with faculty on externally funded research projects and to teach within the department. The department and the institute have strong programs in **GENETICS, MICROBIOLOGY, MOLECULAR, CELLULAR, AND DEVELOPMENTAL BIOLOGY, PLANT SCIENCES, AND ORGANISMAL ECOLOGICAL AND EVOLUTIONARY BIOLOGY**. Individuals wishing to have more information about these opportunities or to apply for positions which may become available should write to: **Postdoctoral Opportunities, Department of Biology, Indiana University, Bloomington, IN 47405.** Applicants should include a résumé, a list of current publications, and the names, addresses, and phone numbers of their references. *Indiana University is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL FELLOW OR ASSISTANT RESEARCH POSITION available for a chemist with experience in solid-state peptide synthesis to work with a UCSF-UCB multidisciplinary group funded by the NCI's NCDDG program and Bristol-Myers to develop anticancer drugs to block oncogene-encoded tyrosine kinases. We are seeking an independent and innovative individual to develop novel substrates and inhibitors for tyrosine kinases. Salary is competitive. Send curriculum vitae and letters of reference to: **Dr. Victor Levin, HSW-783, University of California, San Francisco, CA 94143-0520.**

POSTDOCTORAL FELLOW OR ASSISTANT RESEARCH POSITION available to study substrate and inhibitors of tyrosine protein kinases. Position is part of a multidisciplinary, multi-institutional program sponsored by the NCI's NCDDG program and Bristol-Myers Pharmaceutical Research. We are seeking an individual with strong research skills and experience in enzymology who is highly motivated, organized, and capable of formulating an independent program. Salary will vary depending on experience. Send curriculum vitae and letters of reference to: **Dr. Victor Levin, HSW-783, University of California, San Francisco, CA 94143-0520.**

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE position available to study the neural and molecular bases of learning in *Aplysia*. Research opportunities include electrophysiological and morphological analyses of neural circuitry, biochemical and biophysical studies of the modulation of membrane channels by second messenger systems and their role in learning, and computer simulations of subcellular neural processes and neural circuits. Send curriculum vitae and names of three references to: **J. H. Byrne, Department of Physiology and Cell Biology, University of Texas Medical School, P.O. Box 20708, Houston, TX 77225. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION UNIVERSITY OF WASHINGTON, SEATTLE

A position is available to study the regulation of expression of genes coding for extracellular matrix proteins. Two human genes, one coding for a subunit of type I collagen and the other for thrombospondin have been chosen for detailed study. Of particular interest are the mechanisms by which growth factors influence the expression of these genes. Applicants with some previous experience in molecular biology are preferred. Applicants should send a résumé and the names of three references to: **Dr. Paul Bornstein, Department of Biochemistry, SJ-70, University of Washington, Seattle, WA 98195. The University of Washington is committed to Equal Opportunity through Affirmative Action in Employment.**

POSTDOCTORAL POSITION available immediately to investigate control of peripheral vascular function and sex differences in vascular physiology in humans. Ph.D. or M.D. with experience in cardiovascular physiology or pharmacology. Please send curriculum vitae, reprints and names of three references to: **Robert Freedman, Ph.D., Director, Behavioral Medicine Laboratory, Wayne State University School of Medicine, 95 East Lafayette, Detroit, MI 48207.**

POSITIONS OPEN

POSTDOCTORAL FELLOW (RESEARCH ASSOCIATE), FOREST BIOMETRICIAN. Forestry Ph.D., minor or demonstrated ability in statistics; or statistics Ph.D., experience in forestry applications. Research to develop methodology pertinent to Forest Response Program, National Acid Precipitation Assessment Program. Microcomputer experience, interactive programming, Monte Carlo simulation preferred. Fixed term (18 months), full time available 1 March 1987. Application letter, résumé (list three references), and transcripts by 28 February 1987. **W. G. Warren, Forest Management Department, Oregon State University, Corvallis, OR 97331. Affirmative Action/Equal Opportunity Employer; 1973 Rehabilitation Act Section 504 Compliance.**

POSTDOCTORAL OPENINGS DEPARTMENT OF MOLECULAR BIOLOGY PRINCETON UNIVERSITY

Several postdoctoral positions are available in the areas of molecular biology, genetics and cancer biology. Applicants should send curriculum vitae, references and a brief description of research interests to: **The Postdoctoral Program, Department of Molecular Biology, Lewis Thomas Laboratory, Princeton University, Princeton, NJ 08544.**

Princeton University is an Equal Opportunity/Affirmative Action Employer. M/F

POSTDOCTORAL POSITION for recent Ph.D. interested in mechanisms of nucleoside transport and/or the use of nucleoside transport inhibitors to modulate activity of anticancer drugs. Position available now or July 1987. Salary \$20,000 to \$23,000, depending on experience. Send curriculum vitae, description of research experience and names of three references to:

Judith A. Belt, Ph.D.
Division of Biochemical Pharmacology
St. Jude Children's Research Hospital
332 North Lauderdale, P.O. Box 318
Memphis, TN 38101
An Equal Opportunity, Affirmative Action Employer.

POSTDOCTORAL POSITION available immediately to produce and work with nucleic acid probes to an enteric coronavirus. Experience in virology and hybridization techniques is required. Send curriculum vitae and three references to: **Dr. Daral J. Jackwood, Food Animal Health Research Program, The Ohio State University, Ohio Agricultural Research and Development Center, Wooster, OH 44691.**

POSTDOCTORAL POSITION, BIOCHEMISTRY. The research is aimed at identifying, isolating, and characterizing lignin-degrading enzymes in a filamentous fungus. Work will be in well-equipped laboratories at U.S. Forest Products Laboratory/University of Wisconsin. Available immediately for 1 to 2 years. Salary: \$26,000 per year. U.S. citizens only. Reply: **Dr. T. K. Kirk, Forest Products Laboratory, One Gifford Pinchot Drive, Madison, WI 53705-2398. Telephone: 608-264-5887 or -5866.**

POSTDOCTORAL POSITION available in February 1987 for 3-year NIH-supported study of gap junctional communication in the organ of Corti. Studies will evaluate coupling in vitro and in vivo preparations of the guinea pig inner ear. Experience in cell-coupling, freeze-fracture, or auditory physiology required. Annual salary: \$18,500. Send curriculum vitae and names of three references by 23 January to: **Dr. J. Santos Sacchi, Laboratory of Otolaryngology, University of Medicine and Dentistry of N.J. Medical School, MSB H518, 185 South Orange Avenue, Newark, NJ 07103. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION: Mechanism of the oxidative depolymerization of cellulose by filamentous fungi. Applicant should be familiar with carbohydrate chemistry/biochemistry. Work will be in well-equipped laboratories at the U.S. Forest Products Laboratory/University of Wisconsin. U.S. citizens only. Available immediately for 1 to 2 years. Salary: \$26,000 per year. Reply: **Dr. T. L. Highley or Dr. T. K. Kirk, Forest Products Laboratory, One Gifford Pinchot Drive, Madison, WI 53705-2398. Telephone: 608-264-5615, -5887, or -5866.**

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Advanced scientific research and development has enabled Abbott Laboratories to become the world leader in the rapidly expanding field of medical diagnostics. Our success in diagnostics has made this the fastest growing segment of our \$3.5 billion corporation and has created the following positions:

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Independent research positions in Cancer and Clinical Immunology Research are now available. Individuals with 2-5 years postdoctoral experience in molecular biology, cellular immunology or immunochemistry as applied to these areas are encouraged to apply.

In addition to our advanced scientific environment, Abbott offers excellent salaries and full benefits including stock purchase and profit sharing plans. Our headquarters is located in an attractive suburban area, just 30 miles north of Chicago. **For confidential consideration, please send your resume with salary history to: Stephanie Mondello/Corporate Placement, Dept. S1-9.** Abbott is an Affirmative Action Employer.



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Plant Scientist Biology Department BROOKHAVEN NATIONAL LABORATORY

A position is open for a scientist with Ph.D. or equivalent degree and recent postdoctoral experience. The successful candidate will develop and lead an active, independent research program in the biophysics, cellular, molecular or structural biology of plants. A complete curriculum vitae and the names of three references should be sent by January 16, 1987 to: Dr. Harold W. Siegelman, Biology Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, L.I., NY 11973. Equal Opportunity Employer m/f.

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KERNFORSCHUNGSANLAGE JOLICH GmbH

The KFA is a national research centre funded by the Federal Republic of Germany and the State of North Rhine-Westphalia with a staff of about 4500. The activities of the KFA, comprising both basic and applied research, focus on the fields: properties of matter including materials development, basic research on information technology, technologies for health and environment, biotechnology, energy systems and technology, nuclear fusion and basic nuclear research.

We are seeking a

DIRECTOR

to head our Institute of Biological Information Processing, formerly the Institute of Neurobiology.

The Institute is to investigate mechanisms of biological information processing at the cellular and molecular level. The understanding of these mechanisms on the basis of protein-protein interactions is presently considered to be the long-range goal. Topics of research and development currently under investigation at the Institute are: signal amplification in sensory systems, intracellular signal transmission, signal processing and adaptation.

The Director of the Institute should work in the field of biological information processing and be experienced in methods of molecular genetics. The present staff of the former Institute of Neurobiology has wide experience in biophysical and biochemical methods.

Applications for the position are invited from scientists at universities as well as at industrial and governmental laboratories. Applicants must be capable of leading a research institute and must have outstanding knowledge and experience in the above field. The Director will be expected to cooperate with industry, universities, research establishments and with other institutes at the KFA.

The Director will receive tenure as a full professor at a university in North Rhine-Westphalia and simultaneously be seconded to KFA. The salary will conform to the C-4 scale of the German civil service. The status of a senior lecturer at a university ("Habilitation") or an equivalent scientific qualification is required.

Applications accompanied by a curriculum vitae, a list of publications and a short description of previous scientific activities should be submitted not later than February 15, 1987 to



Vorstand der
KERNFORSCHUNGSANLAGE JOLICH
GmbH
Postfach 1913, D - 5170 Jülich
Federal Republic of Germany

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately at the University of California in San Francisco (UCSF) to study the biochemistry, biosynthesis, expression and regulation of brush border membrane hydrolases in mammalian small intestine and human colorectal cancer cell lines. Requires background and interest in enzymology, protein chemistry, cell culture and use of recombinant DNA methods to examine the molecular basis of enzyme expression. Send curriculum vitae and names of three references to: **Dr. Young S. Kim, Gastrointestinal Research Laboratory (151M2), VA Medical Center, 4150 Clement Street, San Francisco, CA 94121.** UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

POSTDOCTORAL POSITION to study the effects of DNA sequence and conformation on the mutagenesis and repair of carcinogen-induced damage in oncogene related sequences [Topal et al., *J. Biol. Chem.* 261, 9879 (1986)]. Recent Ph.D. in biochemistry, chemistry, or microbiology with interest in chemical mutagenesis/carcinogenesis or molecular pharmacology/toxicology. Knowledge of DNA sequencing and gel footprinting techniques helpful but not required. Send curriculum vitae, three letters of reference, and transcripts to: **Dr. Michael D. Topal, Lineberger Cancer Research Center, University of North Carolina Medical School, Chapel Hill, NC 27514.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available immediately to study the biochemical mechanisms involved in the enhancement of cell adhesion and differentiation by retinoids. Recent Ph.D. with less than 3 years of postdoctoral experience in cell surface macromolecules and/or retinoid biochemistry. Salary will depend on experience. Send curriculum vitae and names of three references to: **Dr. Luigi M. DeLuca, Ph.D., Laboratory of Chemical Carcinogenesis and Tumor Promotion, Division of Cancer Etiology, National Cancer Institute, National Institutes of Health, Public Health Service, Building 37, Room 3825, 9000 Rockville Pike, Bethesda, MD 20892.** An Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately to study eukaryotic gene regulation. Projects involve studies of DNA sequences and DNA-binding proteins which control expression of extracellular matrix genes. Background in molecular biology, cell biology or biochemistry. Send summary of research interests, curriculum vitae and names of references to: **Dr. Noëlynn Oliver, Dept. of Anatomy and Cell Biology, Tufts University School of Medicine, 136 Harrison Avenue, Boston, MA 02111.**

POSTDOCTORAL POSITION available immediately for isolation and characterization of new metalloproteins from the sipunculan erythrocyte, especially those involved in iron metabolism and electron transfer reactions. Persons with experience in either protein purification techniques or physical characterization (for example, EPR, NMR, fast kinetics) of metal sites in proteins are preferred. Send résumé and names of two references to: **Professor Donald M. Kurtz, Jr., Department of Chemistry, University of Georgia, Athens, GA 30602.** The University of Georgia is an Equal Opportunity/Affirmative Action Employer.

Postdoctoral position in molecular biology is available to investigate the role that DNA supercoiling and altered DNA conformations play in the regulation of gene expression in *Drosophila*. The project will involve synthesis of novel DNA sequences, cloning, photochemical cross-linking assays and P-element mediated transformation. Please send curriculum vitae and a list of three referees to: **Drs. Iain L. Cartwright and Richard R. Sinden, Department of Biochemistry and Molecular Biology, University of Cincinnati College of Medicine, 231 Bethesda Avenue, Cincinnati, OH 45267-0522.** An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION CELL PHYSIOLOGY/METABOLISM

Position available immediately for NIH-funded research on cell calcium metabolism and endocrine control of liver function. Candidates should have background in cell physiology and biochemistry. Stipends will be based on NIH guidelines. Send curriculum vitae and three letters of recommendation to: **Dr. Andre B. Borle, Department of Physiology, University of Pittsburgh, School of Medicine, Pittsburgh, PA 15261.**

POSTDOCTORAL POSITION available immediately to study the ontogeny of lymphokine gene expression in the mouse thymus. In situ hybridization, steady-state RNA titrations, nuclear transcription rate measurements and possibly DNA-mediated transformation techniques will be applied to defined cell populations to determine the molecular basis of commitment to the helper T cell lineage. Candidate must have a very strong background in molecular biology and an interest in developmental questions. Send curriculum vitae and three letters of reference to: **Dr. Ellen V. Rothenberg, Division of Biology 156-29, California Institute of Technology, Pasadena, CA 91125.**

POSTDOCTORAL POSITION available 1 April 1987 for research on development of T lymphocytes in *Xenopus laevis*. The project will focus on the establishment of new patterns of inducible gene expression and the role of programmed cell death. Molecular and quantitative cellular approaches will be stressed, and research will be carried out in parallel with ongoing investigations of these questions in the mouse thymus. Candidates should be recent Ph.D.'s with experience in molecular biology and cell biology, and a strong interest in developmental questions. Previous experience with amphibians highly desirable. Send curriculum vitae and three letters of recommendation to: **Dr. Ellen V. Rothenberg, Division of Biology 156-29, California Institute of Technology, Pasadena, CA 91125.**

POSTDOCTORAL POSITION AVAILABLE immediately to study the roles of xanthine oxidase in epithelial differentiation, skin tumor promotion, and regulation of cytochrome P-450 system. Experience in protein purification, monoclonal antibody preparation, and immunohistochemistry preferred. Send résumé and references to: **Dr. John J. Reiners, Jr., University of Texas System Cancer Center, Science Park-Research Division, Smithville, TX 78957.**

An Affirmative Action/Equal Opportunity Employer

POSTDOCTORAL POSITION available to begin anytime between January and September 1987 in laboratory studying human molecular genetics. The principal research focus is the biology of mammalian sex chromosomes. Control of gene expression via X chromosome inactivation, as well as X and Y chromosome homology, pairing, and recombination are being studied along with the mechanisms of several inherited diseases. Extensive use is made of somatic cell genetics, molecular methods, and clinically derived chromosome rearrangements. A recent Ph.D. degree with experience in cloning and sequencing methods is required. Send curriculum vitae with the names of three references to: **Larry J. Shapiro, M.D., Professor of Pediatrics and Biological Chemistry, UCLA School of Medicine, Division of Medical Genetics, 1000 West Carson Street, Torrance, CA 90509.**

POSTDOCTORAL POSITIONS IN MOLECULAR AND IMMUNOLOGICAL PARASITOLOGY available immediately. The projects are: (i) molecular studies of mitochondrial gene expression or antigenic variation in *Trypanosoma brucei* (Dr. K. Stuart); (ii) stage-regulated aspects of microbody biogenesis in *T. brucei*, including molecular characterization of glycosomal targeting sequences (Dr. M. Parsons); (iii) molecular cloning and immunological characterization of *Leishmania* antigens of immunodiagnostic and immunoprophylactic potential (Dr. S. Reed). Experience in molecular biological, biochemical, or immunological techniques and an interest in parasitology is desirable. Send curriculum vitae and names of three references to: **K. Oliver-Garnett, Seattle Biomedical Research Institute (SBRI), 4 Nickerson Street, Suite 100, Seattle, WA 98109-1651.** SBRI is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITIONS available to study structure and function of murine (MuLV, SFV) and human (HIV) retroviruses. Projects involve: (i) site-specific mutagenesis of cloned viral genes—experience in recombinant DNA methodologies required; (ii) immunochemical studies of viral proteins—experience in monoclonal antibody production and protein characterization desired. Send curriculum vitae and names of three references to: **Dr. A. Pinter, Laboratory of Retroviral Biology, The Public Health Research Institute, 455 First Avenue, New York, NY 10016.**

POSTDOCTORAL POSITIONS: Molecular mechanisms of cell interaction. Two positions are available immediately in a group studying the biochemical/molecular basis of cell-extracellular matrix interactions in mammalian cell systems. Experience in protein chemistry and/or molecular biology techniques desirable. Please send curriculum vitae, and two letters of reference to:

**R. L. Juliano
Dept. Pharmacology
UNC-CH School of Medicine
Chapel Hill, NC 27514**

POSTDOCTORAL POSITIONS. The Department of Microbiology has five-year training and research grants to support postdoctoral positions in research in molecular virology, mechanisms of immunity related to Herpes and Togaviruses, coronavirus structure and replication, peptide transport, recombinant DNA/plasmid function in *Pseudomonas*, lymphokine regulation, expression and functions, and other research areas in ongoing collaboration with units in the Knoxville-Oak Ridge area. For further details contact: **Dr. Arthur Brown, Department of Microbiology, University of Tennessee, Knoxville, TN 37996.**

POSTDOCTORAL POSITIONS available in early 1987 to study the mode of action, delivery and targeting of biologic response modifiers. Experience in cell culture and background in biochemistry essential. Experience in one or more of the following areas is helpful: liposomes, biodistribution studies using radioisotope markers, and macrophage activation. Send resume and three letters of references to: **Karl J. Hwang, School of Pharmacy, University of Southern California, 1985 Zonal Avenue, Los Angeles, CA 90033.** Equal Opportunity Employer.

POSTDOCTORAL POSITION— ECOTOXICOLOGY

Research in the area of heavy metal and radionuclide accumulation in aquatic biota. Meticulous analytical skills and experience working with aquatic biota. Computer skills and experience with radiotracers is desirable. U.S. citizenship necessary. Send cover letter, curriculum vitae and three letters of reference to: **M. C. Newman, Savannah River Ecology Laboratory, Drawer E, Aiken, SC 29801.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION MOLECULAR BIOLOGY OF CHEMOTAXIS

Position available to study chemotaxis and its role in metazoan morphogenesis. Focus is on the molecular characterization of the plasma membrane chemotactic receptor and signal transduction via a unique G protein. Work ranges from protein purification and monoclonal antibody production to DNA and RNA analysis [*JCB* 100, 715 (1985); *JBC* 261, 15192 (1986)]. Applicants should submit a current curriculum vitae and letters of recommendation to: **C. Klein, E. A. Doisy Department of Biochemistry, St. Louis University School of Medicine, 1402 South Grand Boulevard, St. Louis, MO 63104.** An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION IN INHALATION TOXICOLOGY to study mechanisms of acute and chronic lung injury and deposition and retention of inhaled substances. Interdisciplinary collaborations with preclinical and clinical research laboratories. Support at NIH scale. Send résumé, description of research interest, experience and references to: **Dr. G. Oberdörster, Department of Biophysics, Medical School, University of Rochester, Rochester, NY 14642.** Equal Opportunity Employer (M/F).

PRODUCT DEVELOPMENT MANAGER

LONDON DIAGNOSTICS, INC. is a developing Company in the Minneapolis area. The Company is specialized in the field of non-isotopic chemiluminescent immunoassays. We are inviting applications for the position of Product Development Manager.

The successful candidate must possess a Ph.D. in the field of immunochemistry and at least five years of experience in applied immunochemistry and product development.

The position will require supervision of a small group of technical associates, and excellent communication skills. We offer a competitive salary and benefits package. Please send resume with salary history to Ms. A. Mosley, London Diagnostics, Inc., 10300 Valley View Road, Eden Prairie, MN 55344.

**LONDON
DIAGNOSTICS, INC.**

Industrial Postdoctoral Position Oncogene Research

Monsanto Agricultural Company is seeking a Postdoctoral Scientist to study the role of oncogene activation and expression in chemical carcinogenesis at our Environmental Health Laboratory in St. Louis, Missouri. Candidates are required to have a PhD with research experience in molecular biology and mammalian cell culture. Previous research experience in oncogenes is preferred. This position is renewable on an annual basis with an anticipated duration of two years. External publications and participation in the scientific community will be encouraged.

Monsanto provides a generous compensation package relative to your responsibilities and qualifications. Interested candidates, please forward your resume to: **V.L. Bozarth, Mail Zone CS6K; Monsanto Company; 800 N. Lindbergh Blvd.; St. Louis, MO 63167.** An Equal Opportunity/Affirmative Action Employer M/F/H/V.

Monsanto

RESEARCH ASSOCIATE MOLECULAR BIOLOGY

An industry leader in advanced biotechnology, **Amgen** develops products for a wide variety of applications. We have an immediate opportunity for a Research Associate to provide support in our specialty Chemicals Department.

The qualified candidate should have a BS/MS in Molecular Biology, Genetics, Biochemistry, or a related field and 1-2 years of experience in the manipulation and characterization of nucleic acids, particularly in microbial systems. Experience and familiarity with some or all of the following techniques is desirable: Cloning, S1 Nuclease Mapping, DNA Sequencing, DNA Hybridization, and Restriction Mapping.

Amgen is located in an attractive community about an hour northwest of Los Angeles, and offers a stimulating and challenging scientific environment as well as an attractive compensation and benefits program.

Qualified candidates should direct a resume and the names of three references to:

**Recruitment, Dept. 98
AMGEN
1900 Oak Terrace Lane
Thousand Oaks, CA 91320**

Equal Opportunity Employer

AMGen

Scientist / Associate Scientist / Postdoctoral Researcher Pharmacological Science

Genentech, Inc., a leader in the field of biotechnology, has openings for individuals to be involved in research concerning the molecular mechanisms of receptor transduction. Stimulus-response coupling of receptors for chemotactic factors, lymphokines, growth factors and hormones will be investigated. Experience in one or more of the following areas is desired: phosphoinositide metabolism, receptor purification, calcium mobilization, receptor desensitization, protein phosphorylation, reconstitution systems, nucleotide regulatory proteins.

The successful candidates will have a relevant PhD, M.D., or equivalent, and in-depth knowledge of the above named technical areas. Work will be performed in a highly stimulating scientific environment with excellent opportunities for broad ranging collaborations.

Genentech offers competitive salaries and benefits coupled with the opportunity to make a significant contribution to our organization. Please send resume to Human Resources Dept. #1060, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. An equal opportunity employer.



Genentech, Inc.
Genentech, Inc.
Genentech, Inc.
Genentech, Inc.
Genentech, Inc.

An *Uncommon* Opportunity

CARDIOVASCULAR BIOCHEMICAL PHARMACOLOGIST

Due to the continued growth and expansion of Research and Development at Marion Laboratories, we currently have an opening in our Cardiovascular Pharmacology Department for an experienced Pharmacologist.

Primary responsibilities will include evaluating the pre-clinical efficacy and mechanism of action of cardiovascular pharmaceuticals, including calcium channel antagonists. The successful candidate should possess a Ph.D. in Pharmacology or related biological science with 0-6 years of post-doctoral experience. Experience with calcium ion fluxes, calcium channel binding studies, and a working knowledge of the calcium antagonist field is desirable. Excellent oral and written communications skills are essential.

Marion Laboratories is an "uncommon company" with an excellent total compensation and benefits program including bonus, stock options, profit sharing, comprehensive group health, dental and life insurance benefits. This position will be located at Marion's Research Facility in Kansas City, Missouri. On the average, we have doubled in size every three years, and we have been cited by Standard and Poors for outstanding future growth potential. Kansas City offers affordable housing, good schools, and all the attractions of a major city. Please send a complete resume including salary history in confidence to: **Marion Laboratories, Inc., Recruiting & Placement, Department CTM, P.O. Box 9627, Kansas City, MO 64134.** Equal Opportunity Employer M/F.

 **Marion
Laboratories, Inc.**

The *Uncommon* Company

VICE PRESIDENT RESEARCH & DEVELOPMENT

Micro Scan, a leading division of Baxter Travenol Diagnostics, has an opening for Vice President of Research & Development.

The individual that we seek must have a Ph.D. in Microbiology with 10+ years experience in clinical applications and direct experience in managing research/clinical groups. The individual we seek will currently be at the Director level. In addition, an in-depth knowledge of identification and susceptibility testing, and new technology assessment and application is required. This position reports directly to the President of Micro Scan.

Interested and qualified candidates send resume, stating current salary, to: **Vice President, Human Resources, Micro Scan, Division of Baxter Travenol Diagnostics, Inc., 1584 Enterprise Blvd., West Sacramento, CA 95691.** Equal Opportunity Employer.



**BAXTER TRAVENOL
DIAGNOSTICS, INC.**

SUMMER 1987 TEN ENVIRONMENTAL SCIENCE AND ENGINEERING FELLOWSHIPS

Applications Invited

The American Association for the Advancement of Science (AAAS) invites applications for ten environmental science and engineering fellowships available for summer 1987. The fellows will work closely with the Environmental Protection Agency (EPA), Office of Research and Development, and other program offices, in Washington, DC, and assist in identifying and assessing the significance of long-range environmental problems and opportunities. The 10-week appointments are scheduled for 8 June through 14 August 1987. The awards will be announced prior to the end of April 1987.

Postdoctoral to mid-career scientists, engineers, and other appropriate professionals are encouraged to apply. Candidates may be from the physical, biological, or behavioral sciences, or any field of engineering or other relevant professional fields. They are expected to be critical thinkers, articulate, adaptable, and able to work with a variety of people from different professional backgrounds.

The 1987 Environmental Fellows will receive a taxable stipend of \$675 per week and a nominal additional amount for temporary relocation expenses and travel in connection with the fellowships.

A detailed, future-oriented research project will be conducted by each fellow which is of mutual interest to him or herself and the EPA. A project report will be submitted at the completion of the summer's work. Typical areas of research interest within EPA include: environmental risk assessment; biological pesticides; acid deposition; mobile source air pollution; oxidants, gases and particles; municipal waste water and spills; drinking water; hazardous waste; chemical testing and assessment; pesticides; radiation; and energy.

For further information and specific application requirements contact:

**Patricia S. Curlin, Manager
Environmental Science and Engineering Fellows Program
American Association for the Advancement of Science
1333 H Street, NW, Washington, DC 20005
Telephone: 202-326-6600**

Deadline for applications is 10 March 1987.

Digestive Diseases Branch Division of Intramural Research National Institute of Diabetes and Digestive and Kidney Diseases National Institutes of Health Public Health Service

POSTDOCTORAL POSITION is available immediately to study the cellular basis of action of gastrointestinal peptides using dispersed cell systems from various gastrointestinal tissues. Experience with receptors or stimulus-secretion coupling is desirable. Candidate must be a U.S. citizen or permanent resident. Salary will range from \$20,000 to \$23,000. Send curriculum vitae, statement of research interests and three letters of reference to:

**Dr. Jerry D. Gardner
Digestive Diseases Branch
National Institutes of Health
Bldg. 10, Room 9C-103
Bethesda, MD 20892**

An Equal Opportunity Employer



PROGRAM MANAGER

BASIC RESEARCH IN PROPULSION AND POWER

The Air Force Office of Scientific Research located at Bolling AFB Washington D.C. invites applications from individuals with a background in university and/or industrial propulsion and energy conversion basic research. An earned Ph.D. is desired. The successful applicant will plan, advocate, and manage the Air Force basic research program in propulsion and power with emphasis on rocket propulsion, plasma energetics, thermal management, and energy conversion. A knowledge of the technical content of U.S. and foreign research in this area is desired. The position is competitive civil service GM-13 with a salary range from \$37,599 to \$48,876 per annum or GM-14 with a salary range from \$44,430 to \$57,759 per annum.

Send applications to:

Civilian Personnel Office
1776MSSQ/OPCA
Ann. No. 86-499
ATTN: Tom Stevens
Andrews AFB, MD 20331

Equal Opportunity Employer
Applications must be received by: 30 Jan 1987.

AUSTRALIA

CSIRO

RESEARCH FELLOW
\$28,107-\$41,339
COTTON RESEARCH UNIT
DIVISION OF PLANT INDUSTRY
MYALL VALE, NSW

FIELD: CROP NITROGEN MODELLING

GENERAL: The Unit is a section of the Organization's Division of Plant Industry which has its headquarters in Canberra, ACT. It is located at the NSW Department of Agriculture's Research station, Myall Vale, via Narrabri and is engaged in developing stable cotton production systems suitable for the Australian environment.

Scientists from both Organizations have collaborated in developing a computer-based pest management system, SIRATAC, to help reduce the amount of wide-spectrum chemical insecticides used in controlling cotton pests. A grower controlled company, SIRATAC Limited, makes the system available commercially to growers. The scope of SIRATAC is being broadened: (i) so that nitrogen can be taken into account in decision making for pest management and irrigation as well as for nitrogen fertiliser management, and (ii) to an overall crop management system which requires on-farm testing. Narrabri is a town with a population of approximately 7500, located on the Namoi River in Northwest NSW and is Australia's major cotton growing district. It has good amenities including a high school, hospital and air, road and rail services.

DUTIES: To undertake research (i) to develop a nitrogen budget using ^{15}N tracer; and (ii) to develop new and existing models to describe and manage nitrogen in the cotton production systems.

QUALIFICATIONS: A PhD degree or equivalent qualifications in a relevant discipline with a sound knowledge of crop modelling and experience in the use of ^{15}N in field experiments.

TENURE: A term of 3 years with Australian Government superannuation benefits available.

ENQUIRIES: To the Team Leader, Dr. Derek Lindsay (079) 36 1288.

APPLICATIONS: Stating relevant personal particulars, including details of qualifications and experience, the names of at least two professional referees and quoting position No X8340, should be directed to:

The Chief
CSIRO Division of Plant Industry
GPO Box 1600
CANBERRA CITY ACT 2601, AUSTRALIA
by 4 weeks from date of publication.

CSIRO IS AN EQUAL OPPORTUNITY EMPLOYER

GENE-TRAK SYSTEMS, a joint-venture between Integrated Genetics, Inc. and Amoco Biotechnology, located in the Western Suburbs of Boston, is expanding its staff to develop and market DNA probe-based diagnostic products.

STAFF SCIENTISTS

Candidates must possess a Ph.D. with previous postdoctoral research. Relevant industrial experience is highly desirable.

Nucleic Acid Enzymologist

Must be expert in the area of nucleic acid replication, transcription, and/or modifying enzymes. Will be involved in DNA probe synthesis, non-isotopic labeling, and assay development.

Biochemist/ Molecular Biologist

Requires experience in the development of nucleic acid hybridization assays or immunoassays for the detection of pathogenic organisms. Responsible for developing new DNA probe diagnostic assays.

Project Leader

Proficient in Assay Development. Responsible for developing a rapid nucleic acid based assay for the diagnosis of gastrointestinal diseases.

ASSOCIATE RESEARCH SCIENTISTS

Positions are also available for developing DNA probe diagnostics. Candidates must have a BS/MS degree and post-graduate employment with an extensive background in molecular biology, immunology, or biochemistry.

GENE-TRAK Systems offers an attractive compensation and benefits package that includes equity participation. For immediate consideration, send your resume to:
**Brian Mazar, Human Resources
Dept. S19**

**GENE-TRAK Systems
31 New York Avenue
Framingham, Massachusetts 01701**

An equal opportunity employer.

**GENE-TRAK
SYSTEMS**

POSITIONS OPEN

POSTDOCTORAL POSITIONS (two) available for studies dealing with the synthesis of radiolabeled "activated-estrogens" and covalent binding of these compounds to DNA and proteins. Background in medicinal or organic synthetic chemistry required. Send résumé and a list of three professional references by 20 February to: **Dr. Yusuf Abul-Hajj, Department of Medicinal Chemistry/Pharmacognosy, College of Pharmacy, HSUF 8-101, University of Minnesota (UM), 308 Harvard Street, SE, Minneapolis, MN 55455. UM is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION IN BACTERIAL POLYSACCHARIDE CHEMISTRY

Applications are invited for a postdoctoral research associate position in the area of bacterial polysaccharide chemistry in the **Department of Microbiology, University of Tennessee, Knoxville**. Candidates should have experience in the isolation, purification, and also in the structural analysis of polysaccharides and depolymerization products using FT-NMR, IR, UV, MS, chromatographic techniques and chemical methods. This position, anticipated in early 1987, will involve development of structure-functional relationships of *Rhizobium japonicum* (endosymbiont of soybean) and *Agrobacterium tumefaciens* (plant pathogen) and also will allow close interaction with molecular biologists and plant physiologists (see *J. Bacteriol.* 164, 102 and January 1987 issue). Interested persons please send résumé, name and address along with three references to: **Dr. Gary Stacey, Department of Microbiology, The University of Tennessee, Knoxville, TN 37996-0845. The University of Tennessee is an Affirmative Action/Equal Opportunity Institution.**

POSTDOCTORAL POSITIONS available in the spring of 1987 in a new consortium project to study small nucleic acids in parasitic kinetoplastid protozoa that are either viral, extrachromosomal or unusual chromosomal sequences. Send curriculum vitae and three references to: **Dr. K. Stuart, Seattle Biomedical Research Institute, 4 Nickerson Street, Suite 100, Seattle, WA 98109-1651, or to: Dr. L. Simpson, Department of Biology, University of California, Los Angeles, CA 90024. Equal Opportunity Employers.**

POSTDOCTORAL POSITION IN PHOSPHOLIPID METABOLISM available immediately for a recent Ph.D. in biochemistry, cellular, or molecular biology. Research areas include role of phospholipid transfer proteins in tissue development and cellular metabolism and gene cloning and sequence analysis of mammalian phospholipid transfer proteins. Stipend is \$18,000 to \$20,000 per year, renewable for 3 years. Send curriculum vitae, names of three references, and summary of research goals to: **G. M. Helmkamp, Jr., Ph.D., Department of Biochemistry, University of Kansas Medical Center, Kansas City, KS 66103. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS IN TUMOR BIOLOGY

Positions available immediately to study the pathogenesis of herpesvirus or papillomavirus infection, including viral replication, gene expression, and transformation. A Ph.D. or M.D. is required with training in molecular biology, virology, or cell biology. Send curriculum vitae and three letters of reference to either: **Dr. Denise Galloway or Dr. James McDougall, Fred Hutchinson Cancer Research Center, 1124 Columbia Street, Seattle, WA 98104.**

The California Space Institute of Scripps Institution of Oceanography (SIO) invites applications for postgraduate (postdoctoral) researchers in the area of developing programs in telerobotics and image processing applicable to space operations and oceanography. The applicants must have relevant Ph.D.'s or equivalent degrees. Experience in image processing and/or robotics. Salary range is \$24,972 to \$27,360, commensurate with experience. Applicants should submit résumé including names and addresses of at least three references to: **Dr. James Arnold, California Space Institute, A-021, La Jolla, CA 92093, by 23 January 1987. The University of California at San Diego is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

PRE- AND POSTDOCTORAL POSITIONS AVAILABLE on the transformation and regeneration of soybeans with genes of agronomic interest. The work will focus primarily on the construction of transformation vectors and the biochemical, genetic, and molecular analysis of the transgenic plants. Submit curriculum vitae, academic transcripts, and request that three letters of reference be sent to: **Dr. D. Hildebrand, Department of Agronomy, University of Kentucky, Lexington, KY 40546. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE—AQUATIC ECOLOGY. Work on planktonic nitrogen and phosphorus dynamics in large lake. Qualifications: (i) knowledge of nutrient dynamics in aquatic systems, (ii) experience with stable and radioactive isotopes, and (iii) ability to work independently. Salary \$19,000 per 12 months. Chances for additional funding are excellent. Send statement of interest, résumé, and two letters of recommendation to: **Dr. John C. Prisco, Department of Biology, Montana State University, Bozeman, MT 59717. Review of applications will begin on 20 February 1987 and continue until a suitable applicant is found.**

POSTDOCTORAL RESEARCH FELLOW position available for recent Ph.D. in physiology/neuroscience to study blood-nerve-barrier alterations in human and experimental neuropathies. Applicants must have experience in quantifying blood-nerve transfer by measurement of permeability-surface area products or multiple indicator dilution and correlation with protein indices. Emphasis on human diabetic neuropathy and animal models. Send curriculum vitae and three letters of recommendation to: **Dr. Joseph F. Poduslo, Peripheral Nerve Center, Departments of Neurology and Biochemistry, Mayo Clinic, Rochester, MN 55905. An Equal Opportunity/Affirmative Action Institution.**

POSTDOCTORAL RESEARCH POSITION: to study acquired resistance to tuberculosis and atypical mycobacterial infections in normal and immunodepleted animals. Experience in cellular immunology, cell cloning or immunochemistry preferred. Position available immediately to Ph.D. graduate. Starting salary will be \$18,500.

The Trudeau Institute is a private, not-for-profit basic medical research institution located on the shore of Lower Saranac Lake and 10 miles from Lake Placid, NY. Subsidized housing and liberal fringe benefits are available.

Send curriculum vitae and names of three references to:

**Dr. Frank M. Collins
Trudeau Institute
P.O. Box 59
Saranac Lake, NY 12983**

An Equal Opportunity Employer.

RESEARCH OPPORTUNITIES. The Mountain Research Station, Institute of Arctic and Alpine Research, University of Colorado, offers support for graduate thesis research in the Front Range of the Rocky Mountains. We also invite applications from scientists who wish to conduct externally funded research. Collaboration, teaching, and Research Associate status are possible for those with postdoctoral experience. The Station is at 2900 meters near Boulder, Colorado, and provides access to environments from 1500 to 4300 meters. Inquiries to: **Dr. Mark Noble, Mountain Research Station, University of Colorado, Nederland, CO 80466.**

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

POSTDOCTORAL POSITION ZOOPLANKTON

A 1- to 2-year postdoctoral position is available for research on aspects of zooplankton physiology or ecology. A preference will be given to individuals utilizing both laboratory and shipboard approaches in their research, with a goal of understanding in situ processes. Salary range is from \$22,000 to \$25,000 per year, depending upon the qualifications of the individual. Send curriculum vitae, names of three references, and brief (less than one page) description of your proposed research to: **Dr. Michael Dagg, Louisiana Universities Marine Consortium, Chauvin, LA 70344 by 31 January 1987. Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL/RESEARCH ASSOCIATE POSITION for a person trained in cellular or molecular biology or virology to study the central nervous system infection caused by HIV. Both tissue from infected patients and cell culture models will be used to investigate the character of brain infection and the basis of HIV neurotropism. These studies are part of a combined clinical and laboratory program investigating AIDS-related dementia and CNS infection by HIV. Send curriculum vitae and names of three references to: **Richard W. Price, M.D., Department of Neurology, Memorial Sloan-Kettering Cancer Center (MSKCC), 1275 York Avenue, New York, NY 10021. MSKCC is an Equal Opportunity Employer M/F/H.**

POSTDOCTORAL TRAINING IN INTEGRATED CELL AND MOLECULAR BIOLOGY

A multidisciplinary research group has several positions available in early to mid-1987 for investigating mononuclear phagocytes. Successful applicants will have the opportunity of joining and working with a diverse, multidisciplinary group of scientists interested in multiple aspects of macrophage physiology, including surface receptors, intracellular mechanisms of signal transduction, cell-cell recognition, tumor biology, and gene regulation. Emphasis in training is placed on analysis of a problem of the fellow's choice in the above areas with tools in contemporary cellular and molecular biology. The faculty members in the group include individuals skilled in leukocyte biology, cell biology, and molecular biology. The interactive nature of the faculty provides exposure to a variety of expertise. Areas of investigation include: Molecular biology—regulation of genes at the molecular level, in response to extracellular ligands; signal transduction mechanisms—investigations of phosphoinositide metabolism, protein phosphorylation, and ion fluxes; effector mechanisms—how leukocytes recognize and destroy replicating invaders in vivo and in vitro; carcinogenesis—inflammatory and free radical mechanisms of carcinogenesis. Interested candidates should submit curriculum vitae and names of three references to: **Dr. D. O. Adams, Dr. T. J. Koerner, Dr. J. G. Lewis, or Dr. V. Prpic at: Department of Pathology, Box 3712, Duke University Medical Center, Durham, NC 27710.**

FACULTY POSITION IN PROTEIN CHEMISTRY DUKE UNIVERSITY MEDICAL CENTER

A JUNIOR FACULTY POSITION (nontenured) has been opened for a scientist with documented skills in protein chemistry and isolation. Our research group is multidisciplinary with interests in effector functions of macrophages and their regulation at the level of cell and molecular biology. A major interest is the analysis of signal transduction in the development of functional competence. We seek an outstanding young scientist skilled in the isolation and purification of cytosolic and nuclear proteins. The individual, whose support can be guaranteed for a minimum of 2 years, will be appointed at the faculty level and have the opportunity to collaborate with members of the group and to develop an independent research program. Interested individuals should send their curriculum vitae and the names of three referees to: **D. O. Adams, Department of Pathology, Duke University Medical Center, Durham, NC 27710. Equal Opportunity Employer.**

POSTDOCTORAL TRAINING POSITIONS in biology and molecular biology of tumorigenesis. Focus on molecular mechanisms involved in differentiation and malignant transformation. Previous experience in areas of gene cloning, mammalian cell culture, preparation and use of monoclonal antibodies and/or protein purification desirable. We seek to recruit individuals with the potential to develop their own research programs after appropriate training. Send curriculum vitae, summary of previous research and areas of current interest along with names of three references to:

**Dr. J. Russo, Department of Pathology or Dr. J. Christman, Department of Molecular Biology Michigan Cancer Foundation (MCF)
110 East Warren Avenue
Detroit, MI 48201**

MCF is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

The California Department of Fish and Game's Marine Pollution Studies Laboratory is seeking an individual to participate in and coordinate a research program to assess the toxic effects of oil spill dispersants on the marine environment. The position is available immediately and is fully funded to June 1989. Candidates must possess: (i) Ph.D. in marine sciences, biochemistry, or a related discipline, (ii) research experience in oil toxicity, (iii) strong communication skills. Send curriculum vitae, references, and previous publications to: **Dr. Michael Martin, Marine Pollution Laboratory, Granite Canyon, Coast Route 1, Monterey, CA 93940.**

POSTDOCTORAL SCIENTIST

POSTDOCTORAL RESEARCH POSITION available to study molecular mechanisms of carcinogenesis with emphasis on dominant and recessive transforming genes. Ph.D. degree in molecular biology or the equivalent required. Replies should be addressed to: **Matthews O. Bradley, Ph.D., Molecular Carcinogenesis and Genetic Toxicology, Merck Sharp and Dohme Research Laboratories, West Point, PA 19486. Equal Employment Opportunity/Affirmative Action/V/H Employer.**

POSTDOCTORAL POSITION IN VIROLOGY

Research involves the molecular biology of baculovirus infections in vitro and in vivo. Ph.D. in microbiology, biochemistry, or related field required. Experience in recombinant DNA techniques desirable. Send résumé and names of three references to: **Dr. H. Alan Wood, Boyce Thompson Institute, Cornell University, Tower Road, Ithaca, NY 14853. An Affirmative Action/Equal Opportunity Employer.**

RESEARCH SCIENTIST. We are seeking a research scientist to join our expanding pulmonary research laboratory at **Long Island Jewish Medical Center**, a major teaching affiliate of SUNY at Stony Brook. The successful candidate will have a Ph.D. in a basic medical science and a productive record of independent investigation in the area of lung inflammation and repair. We offer a professional work environment, guaranteed salary commensurate with experience, a comprehensive benefits package and an academic appointment. Interested candidates should submit curriculum vitae and three letters of reference to: **Michael Belenko, M.D., Division of Pulmonary and Critical Care Medicine, Long Island Jewish Medical Center, New Hyde Park, NY 11042. An Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE IN PLANT PATHOLOGY. Non-tenured-track 24-month position. Application of immunoenzymatic techniques to plant disease diagnosis. Experience in EIA and electrophoretic techniques required. Available 15 February 1987. Contact: **B. E. Lockhart, Department of Plant Pathology, 495 Borlaug Hall, 1991 Upper Buford Circle, University of Minnesota, St. Paul, MN 55108. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.**

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE SOUTHERN FOREST EXPERIMENT STATION

RESEARCH ENTOMOLOGIST, USDA, Southern Forest Experiment Station, Gulfport, Mississippi, is seeking a research entomologist (permanent) to conduct studies on termite control. Incumbent is responsible for nationwide field evaluation of termiticides. The primary objective is to determine the efficacy of chemicals for subterranean termite control. Knowledge of statistical methods, skill in developing and improving insect control methods and the ability to report results orally and in writing are required. A Ph.D. or equivalent education and experience are required. U.S. citizenship is required. Salary is commensurate with experience, GS/GM-12/13 (\$32,567 to \$38,727). Information concerning the position may be obtained by telephone: 504-589-3921. *The USDA is an Equal Opportunity/Affirmative Action Employer.*

PHARMACEUTICAL RESEARCH SCIENTISTS

International Minerals & Chemical Corporation, a diversified Fortune 200 company, is among the world's leading producers of nutrients for crops and products for animal agriculture. Through Mallinckrodt, a wholly-owned subsidiary, the company is a major supplier of specialty chemicals, medical products, and flavors & fragrances.

The corporation's commitment to broaden its animal products business has led to the expansion of its efforts in animal pharmaceutical research. As a result, we are presently seeking several research scientists who have demonstrated a capacity for extensive problem solving through individual creativity and original thinking.

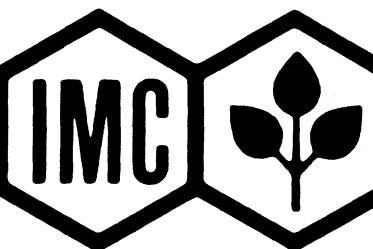
The individuals we seek will be responsible for planning, conducting and evaluating basic and applied research and product development projects of a complex nature. Successful candidates will have a Ph.D. in Pharmaceutical Chemistry, Physical Biochemistry or a related field. Consideration will also be given to those with an M.S. degree and a minimum of five years experience.

Candidates for these positions must have training and experience in drug preformulation, pharmacokinetics, sustained drug delivery and/or modern drug design methodology. Experience in protein/peptide characterization and animal drug evaluation is preferred. Strong oral and written communication skills are essential.

If you have demonstrated professional expertise in the area of animal pharmacology and would like to become a part of an expanding research effort with a growth-oriented company, IMC can offer you a competitive salary, excellent benefits and a dynamic research work environment. We invite you to reply in confidence to: **International Minerals & Chemical Corporation, Attn: Mr. James E. Moore, P.O. Box 207, Terre Haute, IN 47808-0207**

INTERNATIONAL MINERALS & CHEMICAL CORPORATION

An Equal Opportunity Employer



GEOCHEMIST

BROOKHAVEN NATIONAL LABORATORY (BNL)

A position is open in the Division of Atomic and Applied Physics of the Department of Applied Science for a scientist with postdoctoral experience and a record of accomplishment in earth sciences to develop and lead a new program of research on basic problems in the earth sciences.

We seek candidates whose research interests coincide with BNL facilities for trace element analysis, viz. X-ray microprobe at the National Synchrotron Light Source, ion beams from the 3.5-MV Research Electrostatic Accelerator, and the Tandem accelerator mass spectrometry facility. Candidates must be interested in working in an interdisciplinary and interdepartmental collaborative setting for interactions on a broad range of earth science problems. Candidates should contact Keith W. Jones, Division of Atomic and Applied Physics, Department of Applied Science, Brookhaven National Laboratory, Associated Universities, Inc., Upton, L.I., NY 11973. Equal Opportunity Employer m/f.

BNL BROOKHAVEN
NATIONAL LABORATORY
ASSOCIATED UNIVERSITIES INC

PHARMACEUTICALS

Ph.D. / M.S. SCIENTISTS AIDS VACCINE RESEARCH

As part of our expanding activities in Viral Vaccine Research and Development, the Department of Virus and Cell Biology at the Merck Sharp and Dohme Research Laboratories is able to offer several career research opportunities. Laboratory studies will encompass the immunobiology of the human immunodeficiency virus (HIV) and the antigenic analysis of candidate vaccines.

We envision a long-term commitment to AIDS-related research and we invite exceptional scientists at the Ph.D. and M.S. levels to join this program. While previous laboratory experience with HIV is highly desirable, all applicants with significant experience in up-to-date immunological techniques, cell culture methodology and/or virological techniques will be seriously considered.

An excellent salary and a superb benefits program accompany these positions at our modern, state-of-the-art research facilities located in suburban Philadelphia, Pennsylvania.

Reply in confidence to:
Jacques P. Kueny, Manager, Personnel Relations

MERCK SHARP & DOHME RESEARCH LABORATORIES

West Point, PA 19486

Equal Opportunity Employer, M/F/V/H



Merck & Co., Inc.

POSTDOCTORAL FELLOWSHIPS

St. Jude Children's Research Hospital, a large multidisciplinary research institute, has openings for postdoctoral investigators in the basic biomedical sciences. Fellowships are available in molecular genetics, tumor cell biology, pharmacology, biochemistry, immunology and other related disciplines. Specific areas of investigation include proto-oncogenes and growth factors, genetic control of cellular differentiation, biochemical basis of multiple drug resistance in childhood neoplasms, regulatory properties of viral proteins, macrophage immunobiology, phospholipid metabolism, and cellular messenger systems. Successful applicants train with internationally recognized preceptors in a fully equipped facility and are given the opportunity to develop as independent investigators. Annual salaries begin at \$20,000 and are commensurate with experience.

Application forms and a more detailed description of the training program can be obtained from:

**Ms. Evonne Toland, Director's Office
St. Jude Children's Research Hospital
P.O. Box 318
Memphis, TN 38101**

An Equal Opportunity Employer

SJCRH

Toxicologist

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

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

The position offers an excellent opportunity for professional recognition and career growth. We offer an excellent salary, benefit and relocation package plus an attractive southeastern Connecticut shore location. Qualified applicants should submit their resume, including the names, addresses and phone numbers of three professional references, to: Dr. J.K. Larson, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.



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RESEARCH FELLOW
A\$28,107-A\$41,339
FISHERIES BIOLOGIST/OCEANOGRAPHER
DIVISION OF FISHERIES RESEARCH
MARINE LABORATORIES
HOBART

FIELD: Remote Sensing (Ocean Colour)

GENERAL: The CSIRO Divisions of Fisheries Research and Oceanography collectively form the CSIRO Marine Laboratories. The Division of Fisheries Research undertakes studies into biology, ecology and population dynamics of marine populations (both plant and animal) and supplies information for the development of management strategies for fisheries within the A.F.Z. The Division currently employs about 140 staff of whom 80 are professional research staff. Laboratories are located in Hobart, Perth and Brisbane.

DUTIES: As a member of the Remote Sensing group in the Division of Fisheries Research, the appointee will undertake a research program aimed at the development and implementation of algorithms to measure chlorophyll and other biologically important parameters using data from airborne multispectral scanners (AMSS) and the NIMBUS Coastal Zone colour Scanner (CZCS). The appointee will collaborate with the Remote Sensing Group of the Division of Oceanography and other CSIRO Divisions to develop appropriate data processing techniques to utilize AMSS and CACS data.

The appointee will be required to do his/her own computer programming.

LOCATION: The appointee will be located at the Division's Headquarters at the Hobart Laboratories.

QUALIFICATIONS: A PhD degree or equivalent qualifications in applied physics, oceanography or other relevant discipline. Considerable experience with image processing systems and software development is required. Familiarity with the processing of ocean colour data would be a distinct advantage.

TENURE: A term of 3 years with Australian Government superannuation benefits available.

APPLICATIONS: Stating relevant personal particulars, including details of qualifications and experience, the names of at least two professional referees and quoting reference No A4600, should be directed to:

The Chief
 CSIRO Division of Fisheries Research
 GPO Box 1538
 HOBART TAS 7001, AUSTRALIA
 by 4 weeks from date of publication.

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KUWAIT INSTITUTE FOR SCIENTIFIC RESEARCH
STATE OF KUWAIT

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 a vacancy for a
MOLECULAR GENETICIST

MAJOR DUTIES:

To carry out extensive research on the genetic improvement of industrial micro-organisms using recombinant DNA Technology. The successful candidate is expected to develop advanced methods for cloning and analysis of gene expression in micro-organisms.

QUALIFICATIONS:

Applicants should have a Ph.D. in molecular genetics or molecular biology with a minimum of 5 years experience in recombinant DNA technology. Experience in tissue culture techniques is desirable but not essential.

KISR offers attractive tax free salaries commensurate with qualifications and experience and generous benefits, which include gratuity, free furnished air-conditioned accommodation, school tuition fees for children, contribution to a savings plan, six weeks annual paid vacation, airtickets, free medical care and life insurance. Interested applicants are requested to send their curriculum vitae with supporting information not later than one month of this publication to:

Mr. Habeeb Al-Sahhaf
 Personnel Manager
 Kuwait Institute for Scientific Research
 P.O. Box 24885 Safat
 13109 Safat
 KUWAIT

RESEARCH SCIENTISTS

MOLECULAR BIOLOGY PROTEIN BIOCHEMISTRY TORONTO

Allelix Inc. is a biotechnology-based company developing products and processes for agriculture, diagnostics and specialty chemicals. Since the Company commenced operations in 1983, it has grown to a staff of over 200 and has established important proprietary technologies for its market areas.

The Corporate Molecular Research Division has openings for Research Scientists to play lead roles in the application of Allelix technology. Opportunity for involvement in new technology development programs will also be available.

MOLECULAR BIOLOGY

Applicants will be prepared to take responsibility for gene cloning and genetic engineering aspects of projects aimed at utilizing proprietary gene expression, secretion and transposon mutagenesis technology. Candidates should have a Ph.D., and preferably postdoctoral experience with proven expertise in genetic engineering. (File Number CMR8603)

PROTEIN BIOCHEMISTRY

This position is concerned with purification, and characterisation of proteins and enzymes in projects aimed at utilizing proprietary gene expression and secretion technology. The ideal candidate will have a Ph.D. in biochemistry and be familiar with all modern techniques of protein purification and characterisation. (File Number CMR8604)

We are located in a custom-designed and very well equipped facility on the outskirts of Toronto and provide fully competitive salaries and benefits.

Please send a detailed application, supported by three references and quoting the appropriate File Number to: Mr. Walter L. Gagen, Manager, Administrative Services, Allelix Inc.
 6850 Goreway Drive, Mississauga,
 Ontario L4V 1P1.
 Canada.

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Allelix^{INC}

SENIOR RESEARCH SCIENTIST

Rorer, a worldwide ethical pharmaceutical company, has an immediate opening for a Senior Research Scientist in the Cardiovascular Section of its Pharmacology Department of its growing research operation located in suburban Philadelphia.

The successful candidate will possess a PhD in Pharmacology or related discipline, have a good publication record and be interested in drug discovery with emphasis at both the physiological and biochemical levels. In addition, individuals should possess 3 to 5 years experience following their PhD. Experience in smooth muscle tissue contractile mechanisms and/or interest in lipid biochemistry is desirable. Industry experience is a plus. Excellent oral and written communication skills are essential.

If your background and experience match our requirements, we would like to hear from you. We offer the opportunity for professional growth, a competitive salary, comprehensive benefits package and a pleasant work environment. Please submit your CV to **Steven P. Hochberg, Manager, Staffing and Compensation, Rorer Central Research, 800 Business Center Drive, Horsham, PA 19044.** Equal opportunity employer, M/F.



Rorer Central Research

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AUSTRALIA CSIRO

**RESEARCH FELLOW (BIOCHEMISTRY)
A\$28,107-A\$41,339
DIVISION OF TROPICAL ANIMAL SCIENCE
TROPICAL CATTLE RESEARCH CENTRE
ROCKHAMPTON, QLD**

GENERAL: The Division of Tropical Animal Science conducts research on the improvement of animal production, particularly cattle production, in tropical Australia. It brings together programs on breeding and physiology, disease and parasite control, and nutrition.

A major area of research being conducted at the Division's Tropical Cattle Research Centre is aimed at manipulating growth rate in cattle. Beef production in tropical environments is dependent on cattle making rapid weight gains when nutritional conditions are good to compensate for weight lost when nutritional conditions are poor. Improvements in the efficiency of production will occur from stimulation of growth rate during the growing season and reduction in the rate of weight lost in the dry season. Current research is investigating methods of reducing maintenance energy requirements of cattle under poor nutritional conditions. This requires a knowledge of biochemical processes in ruminant animals and the ability to investigate ways of controlling them.

DUTIES: As part of the research team in Rockhampton, the appointee will conduct collaborative work relating to protein synthesis and degradation and their interaction with other aspects of metabolism in cattle, particularly during periods of low growth, weight stasis or weight loss. Research will include manipulation of metabolism by hormones, pharmacological agonists/antagonists and immunization techniques.

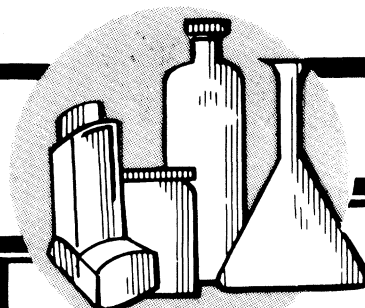
QUALIFICATIONS: A Ph.D. degree or equivalent qualifications in biochemistry or physiology of metabolism.

TENURE: A term of three years with Australian Government superannuation benefits available.

APPLICATIONS: Stating relevant personal particulars, including details of qualifications and experience, the names of at least two professional referees and quoting reference number A0546 should be directed to:

**The Chief
CSIRO Division of Tropical Animal Science
Private Bag No 3 PO
INDOOROOPILLY QLD 4068 AUSTRALIA**
By February 6, 1987.

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- Isolation and identification of impurities and degradation products.
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Careers are available for experienced and non-experienced individuals with backgrounds in a wide variety of specializations such as: chromatography, spectroscopy, physical organic chemistry and analytical chemistry. Ph.D. level positions are available in Analytical Chemistry, Pharmaceutical Science, and Physical Organic Chemistry. B.S. and M.S. candidates with strong backgrounds in analytical and organic chemistry are also being sought.

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POSITIONS OPEN

RESEARCH ASSISTANT PROFESSOR AND RESEARCH ASSOCIATE

Multidisciplinary diabetes research laboratory has two positions available, one a faculty level appointment to work in an islet cell transplantation research program. Applicants should have expertise in cell separation procedures and tissue culture. Immunology background and thorough understanding of cryopreservation methodology is highly desirable. Islet isolation from human pancreas donors requires that candidates should anticipate night and weekend work. The focus of the research effort will be to obtain high yields of purified mammalian islets for human transplantation and in vitro studies of islet immunogenicity. Send curriculum vitae and three letters of recommendation to: **Daniel H. Mintz, M.D., Department of Medicine (R-134), University of Miami School of Medicine, P.O. Box 016960, Miami, FL 33101.**

SURGICAL RESEARCH ASSOCIATE

Position available for research associate experienced in dog abdominal surgery and the conduct of research protocols in dogs and rodents, to work in an islet transplantation research program. Individual will also participate in human pancreas organ retrievals from centers throughout the Southeastern U.S., requiring acquisition of specialized skills in hypothermic preservation of pancreases. Send curriculum vitae, and three letters of recommendation (if available) to: **Daniel H. Mintz, M.D., Department of Medicine (R-134), University of Miami School of Medicine, P.O. Box 016960, Miami, FL 33101.**

VISITING PROFESSOR OF AGROFORESTRY

The University of Florida invites applications for a new senior-level position in agroforestry/tropical forestry. Responsibilities include interdisciplinary program development, research, teaching, supervising graduate students, and participating in international activities. Ph.D. (one degree in forestry or related area) and field experience in technical and social aspects of tropical agroforestry required. Spanish, French, or Portuguese desirable. This is a non-tenure accruing two-year position; further support and conversion to tenure-track may be possible. Send letter, résumé, and names of three references to: **Dr. H. Gholz, Department of Forestry, University of Florida, Gainesville, FL 32611; by 15 February 1987. The University is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH SCIENTISTS

The University of Texas Health Science Center at San Antonio is currently recruiting for two research scientist positions. One research scientist will direct a project involving isolation of membranes involved in intracellular traffic and sorting of plasma membrane proteins. A doctoral degree in biochemistry, cell biology, or immunochemistry and 2 years' experience are required. The other research scientist will direct a project involving investigation of protein biosynthesis and sorting of proteins in retinal photoreceptors. A doctoral degree in molecular biology and 2 years' experience are required. Please send curriculum vitae to: **The University of Texas Health Science Center at San Antonio, Human Resources Department, 7703 Floyd Curl Drive, San Antonio, TX 78284.**

Equal Opportunity/Affirmative Action Employer.

TECHNICAL DIRECTOR ELECTRON MICROSCOPY LABORATORY

The University of Texas Health Science Center at San Antonio is currently recruiting for a Technical Director for the Electron Microscopy Laboratory. The position requires a bachelor's degree in biology or related medical science and four years' experience in the field of electron microscopy. TEM, JEOL SEM, and Freeze-Etch experience required. Negative staining and enzyme localization procedures and immunogold techniques are also necessary. Please send curriculum vitae to: **The University of Texas Health Science Center at San Antonio, Human Resources Department, 7703 Floyd Curl Drive, San Antonio, TX 78284.**

Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

RESEARCH ASSOCIATE position available immediately in developmental neuroendocrinology. Project focuses on cellular regulation of pituitary growth hormone release during early development. Techniques used include tissue culture and radioimmunoassay. Background in cellular or molecular biology and endocrinology desirable. Position is available for at least 3 years. Please contact: **Dr. L. Cuttler, University of Chicago, Department of Pediatrics, 5841 South Maryland, Box 118, Chicago, IL 60637; telephone: 312-962-6432.**

RESEARCH ASSOCIATE IN MOLECULAR NEUROSCIENCE, University of Texas Health Science Center at Dallas, Department of Neurology, invites applications from M.S., Ph.D. or M.D. individuals with comprehensive experience in molecular genetics to pursue: (i) characterization of reiterated DNA sequences and their possible transcriptional products altered during mammalian brain development or oncogenesis of glioma and neuroblastoma and/or (ii) Northern blot analysis of hormonal induction of specific mRNAs in developing neural tissue. Interested applicants should send curriculum vitae and names of three references to: **Dr. Roger N. Rosenberg, Department of Neurology, UTHSCD, 5323 Harry Hines, Dallas, TX 75235-9036. UTHSCD is an Equal Opportunity Employer.**

SYSTEMS ANALYST/APPLICATIONS PROGRAMMER—Will oversee installation and operation of a sun microsystems network node. Coordinate the writing and development of new applications by a small group of programmers and be responsible for programming projects. Reports to two senior scientific investigators, bachelor's plus 4 years' experience or master's plus 2 years' experience required. Degree specialty mathematics/computer science/engineering or related physical science. Experience in programming in the UNIX environment required. May participate in research cruises. Assists in the development of new hardware/software systems for data acquisition in collaboration with other groups. Salary low-mid 20's, BX/BS plus 1 month of vacation. If interested and qualified, please send résumé to: **M. Mokhtari, Personnel Supervisor, Lamont-Doherty Geological Observatory of Columbia University, Palisades, NY 10964. Columbia University is an Equal Opportunity/Affirmative Action Employer.**

The Department of Veterinary Physiology, Pharmacology and Toxicology, Louisiana State University, has a tenure-track position at the rank of **assistant or associate professor** available 15 March 1987. The candidate must have a Ph.D. degree in pharmacology or toxicology. Preference given to candidate with the D.V.M. or equivalent degree with expertise in one of the following areas; aquatic toxicology, neuropharmacology/toxicology, or drug metabolism/toxicokinetics. Duties include teaching toxicology to professional and graduate students, development of a fundable research program, and consultation. The department has excellent facilities, an outstanding equipment base, and enthusiastic faculty. Reply by 1 March 1987 to: **Dr. Charles R. Short, School of Veterinary Medicine, Baton Rouge, LA 70803. LSU is an Equal Opportunity Employer.**

THE UNIVERSITY OF TEXAS AT AUSTIN ASTRONOMY DEPARTMENT

**Invites Applications for the
Vaughan Centennial Chair in Astronomy**

The Department of Astronomy is seeking a **senior observational astronomer** to fill an endowed chair. This position is available as early as 1 September 1987, will be tenured at the full-professor level and will have earnings from its endowment available for research purposes.

The successful candidate will have a major influence on the future course of the department and McDonald Observatory. We seek primarily an optical observer with a record of major research accomplishments. Experience with instrumentation is desirable but not necessary.

Interested persons should contact: **J. Craig Wheeler, Chairman, Astronomy Department, University of Texas at Austin, Austin, TX 78712.**

The University of Texas at Austin is an Equal Opportunity Employer with an Affirmative Action Program. We encourage and welcome applications from all qualified persons regardless of sex, race, creed, national origin, or non-disqualifying handicap.

POSITIONS OPEN

DEPARTMENT OF BIOLOGICAL SCIENCES FORDHAM UNIVERSITY SENIOR FACULTY POSITION

SEARCH EXTENDED. We seek a molecular biologist working on the regulation of eukaryotic gene expression at the transcriptional level. The candidate should have an established research program and a strong record of research productivity and funding. It is expected that he/she will contribute significantly to the further development of the department's cell/molecular biology program. Salary is highly competitive and we desire an individual whose credentials would justify appointment as full professor. Curriculum vitae, supporting materials, and names of three references should be sent to: **Dr. Sergio Abreu, Chairman, Department of Biological Sciences, Fordham University, Bronx, NY 10458.** The deadline for receipt of applications is 15 February 1987.

Fordham University is an Equal Opportunity Affirmative Action Employer.

RESEARCH ASSOCIATE. Beth Israel Medical Center, a major NYC 1000-bed teaching hospital affiliated with the Mount Sinai School of Medicine, has immediate opening for a research associate (Ph.D.) for Endocrinology Research Laboratory. Should be familiar with cell culture, hormone receptor assays and radioimmunoassay techniques. Excellent salary and benefits. Please send résumé to: **Human Resources Department, Beth Israel Medical Center, First Avenue at East 16 Street, New York, NY 10003. An Equal Opportunity Employer.**

RESEARCH ASSOCIATE TULANE UNIVERSITY MEDICAL CENTER

Research associate/postdoctoral positions available for individuals with an M.D./Ph.D. degree, with experience in cell biology, immunochemistry, particularly the synthesis and release of factors regulating immunocompetent cells and connective tissue matrices. Successful candidates will interact with a large multidisciplinary group of scientists investigating pathogenetic mechanisms of environmentally induced fibrotic lung disease. Applicants must submit a résumé and names of three references to:

**Samuel B. Lehrer, Ph.D.
Professor of Medicine
Tulane University School of Medicine
1700 Perdido Street
New Orleans, LA 70112**

TRAINING PROGRAM

Postdoctoral Training Program CELLULAR AND MOLECULAR ENDOCRINOLOGY

Postdoctoral traineeships are available for 1987 in a NIH-supported program. Trainees with a Ph.D. or M.D. degree having U.S. citizenship or permanent residence in the United States will participate in a research program with 1 of 13 faculty from the Biochemistry Department and the Division of Biomedical Sciences on the campus of the University of California, Riverside. The purpose of the program is to provide for research training at the postdoctoral level in the following five major areas of focus:

- intracellular events in hormone action;
- endocrinology of vitamin D, calcium, phosphorus and bone;
- insulin and its action;
- molecular biology of hormone action;
- hemopoietic growth factors and lymphokines.

For detailed information and application forms write to:

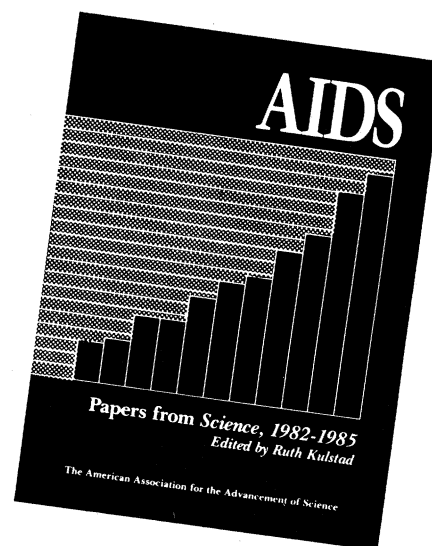
**Dr. Anthony W. Norman, Program Director
Division of Biomedical Sciences
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Some of the most frequently cited papers on acquired immune deficiency syndrome (AIDS) that appeared in *Science* between August 1982 and September 1985 are included in this volume. Arranged chronologically, these 108 research papers and *Science* news reports show how far AIDS research has come and provide an indication of the directions in which it might go.

This fully indexed collection is useful not only for the experimental data and conclusions, but also as an excellent source of references to AIDS work in other major journals worldwide. An overview of research in AIDS to date is provided in the introduction by Dr. Myron Essex, chairman of the Department of Cancer Biology, Harvard University School of Public Health.

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American Association for the Advancement of Science

CONFERENCES

29 January 1987: The Biotechnology Division of Fisher Scientific is sponsoring a Mind Broadening Adventure on "Some Do's, Don'ts, and How To's in Cell Culture" to be held at the Amfac Hotel in Burlingame, CA. For further details, write to: S. Daniel Makover, Ph.D., Fisher Scientific, 711 Forbes Avenue, Pittsburgh, PA 15219, or telephone: 412-562-1702.

The New York Academy of Sciences Conference on Bombesin-like Peptides in Health and Disease Rome, Italy, 13-16 October, 1987

The conference will include invited speakers addressing issues related to the following topics: chemistry and molecular biology of bombesin-like peptides; tissue distribution, localization, and characterization of bombesin receptors; cellular, peripheral, and central nervous system actions; and the role of bombesin-like peptides in tumor diagnosis and treatment.

There will be two contributed poster sessions. Abstracts related to any of the topics listed above are welcome. The deadline for submission of abstracts is 15 June 1987. The abstracts should include the name of the author(s), institution, and a maximum two-page summary of the work to be presented. Send abstracts to Joyce Fried at the address below.

Conference Honorary President: Victor Erspamer. Conference Cochairmen: Pietro Melchiorri, M.D., Ph.D., and Yvette Taché, Ph.D.

For program or registration information, contact: Joyce Fried, Brain Research Institute, University of California, Center for the Health Sciences, Los Angeles, CA 90024; telephone: 213-825-5061.

COURSES

MOLECULAR ENDOCRINOLOGY AND TECHNIQUES FOR HORMONE ACTION 22 to 27 February 1987

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

Co-directors: W. T. Schrader and B. W. O'Malley

Fee: \$365 (\$245, fellow)

For further information, contact:

Bonnie Cuthbert
Department of Cell Biology
Baylor College of Medicine
Houston, TX 77030
713-799-6200

DEADLINE—30 January 1987

SYMPOSIA

MOLECULAR MEDICINE AND BIOLOGY IN MAN AND OTHER MAMMALS

Seventh Charles River International Symposium at the Marriott Copley Place, Boston, Massachusetts, 4, 5, and 6 May 1987. For information contact: Mr. Gilbert M. Slater, Charles River Laboratories, Inc., 251 Ballardvale Street, Wilmington, MA 01887. Telephone: 617-658-6000 ext. 334.

BIOCHEMICAL ENDOCRINOLOGY SYMPOSIUM

The Ninth Annual University of California, Riverside-Nichols Institute Symposium on Cellular and Molecular Endocrinology will be held 26 to 27 March 1987 on the University of California, Riverside campus and focuses on the topics of (i) Hormone Regulation of Gene Expression; (ii) Hormones and Phosphoinositol-Signaling Pathways; (iii) Insulin and Insulin-like Growth Factors: Clinical and Basic Sciences Update; and (iv) Lymphocyte Activation and Signaling.

For registration and further information please write: Dr. Anthony W. Norman, Program Director, Endocrinology Symposium, Division of Biomedical Sciences, University of California, Riverside, CA 92521; telephone: 714-787-5705.

FELLOWSHIPS

RESEARCH ASSISTANT I, POSTDOCTORAL POSITION—Available April 1987. To examine structural and mechanistic aspects of molybdenum-containing enzymes. Expertise in the application of EPR to metalloproteins highly desirable. Send curriculum vitae and three letters of recommendation to: Dr. R. Hille, Department of Physiological Chemistry, The Ohio State University, 1645 Neil Avenue, Room 124, Hamilton Hall, Columbus, OH 43210-1239. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS are currently available in the area of extracellular matrix, supported by an NIH Institutional training grant. Potential areas of research include molecular biology of collagens and proteoglycans, developmental biology of limb formation, structure/function relationships of matrix macromolecules, and regulation of matrix expression. Applicants may choose amongst ten participating faculty. Contact: Dr. Marvin L. Tanzer, Department of BioStructure and Function, University of Connecticut Health Center, Farmington, CT 06032.

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

DOCTOR OF ARTS IN BIOLOGICAL SCIENCES: FELLOWSHIPS are available for qualified persons interested in the D.A. degree in biological sciences. The program stresses preparation for undergraduate teaching at colleges and universities. Applicants should hold a master's degree in some area of biology. Deadline for receipt of application is 1 March 1987. For more information contact: Chairman D. A. Committee, Department of Biological Sciences, Idaho State University, Pocatello, Idaho 83209. An Equal Opportunity Employer.

Herbert Scoville Peace Fellowships Available in 1987—Applications now available for \$3000 stipend, plus travel expenses, for college graduates to work 3 to 4 months in Washington, DC, on arms control research and/or action activities for disarmament, nuclear arms control and peace organizations. Deadline for completed action is 1 March for fall 1987 semester. For further information, program description, and application requirements, write: Scoville Peace Fellowship Program, 110 Maryland Avenue, NE, Room 211, Washington, DC 20002.

INTERNATIONAL CANCER RESEARCH FELLOWSHIP

The Hayashibara Mutual Aid Fund, a nonprofit making organization within the Hayashibara Group, announces a fellowship program. Two awards will be made annually. Fellowship will be taken up at the newly opened Fujisaki Cell Center which is devoted to basic and applied research related to the problems in human cancer. The fellowship is normally made for 1 year and is renewable for up to 5 years. The fellowship will be expected to commence within 6 months of the announcement of the awards. The awards are for high quality research work in one of the three categories described below.

1. Fundamental Leukemia-Lymphoma Research,
2. Cytokine-Lymphokine Research,
3. Hematopoietic Cell Cultures.

Qualified person who has a Ph.D., an M.D., or equivalent qualifications will be awarded on merit to suitably qualified research proposal and experiences. Additional information and application forms will be obtained from: Jun Minowada, M.D., Director, Fujisaki Cell Center, 675-1, Fujisaki, Okayama 702, Japan.

PREDOCTORAL FELLOWSHIPS IN BIOMEDICAL AND PHYSICAL SCIENCES

Biochemistry—Biology—Biomathematics—Biomedical Engineering—Biophysical Sciences—Biostatistics—Chemistry—Computer Science—Cell Biology and Anatomy—Genetics—Immunology—Neuroscience—Nutrition Sciences—Materials Engineering—Medical Genetics—Medical Psychology—Molecular Cell Biology—Pathology—Pharmacology—Physics—Physiological Optics—Physiology—Public Health—Virology

Well-funded faculty with diverse interests. Good post-graduation placement record. Above average stipends include payment of tuition. Contact: The Graduate School (A), University of Alabama at Birmingham, Birmingham, AL 35294; telephone: 205-934-8246. Equal Opportunity/Affirmative Action Institution.

FELLOWSHIPS

A limited number of **POSTDOCTORAL FELLOWSHIP** positions will be available in the fall of 1987 for research in marine sciences and ocean engineering. Research areas include physical oceanography, macroalgal botany, invertebrate larval biology, zooplankton biology, invertebrate reproduction and development, fish ecology and behavior; mechanical, electrical, or environmental engineering. Deadline for application is 1 April 1987. Request information brochure and application packet from: Dr. Marsh J. Youngbluth, Postdoctoral Program, Harbor Branch Oceanographic Institution, Incorporated, 5600 Old Dixie Highway, Fort Pierce, FL 33450. An Equal Opportunity Employer.

Predocutorial fellowships in anthropology, biomedical engineering, ceramic science and engineering, chemical and biochemical engineering, chemistry, computer science, ecology, food science, geological sciences, mathematics, mechanical and aerospace engineering, mechanics and materials science, microbiology, nutrition, operations research, pharmacology, physics, plant pathology, psychology, statistics, and toxicology.

GRADUATE SCHOOL—NEW BRUNSWICK RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY

Outstanding applicants are invited to apply to the above doctoral programs and compete for our Excellence or Marion Johnson Fellowships for the fall semester, 1987. Stipends of up to \$10,000, plus tuition remission, renewable for up to 4 years of full-time study, are available to support high-quality students entering these graduate programs at Rutgers University in New Brunswick. Applicants are required to submit complete transcripts, results of the GRE, and recommendations from individuals who are willing to attest to the strength of the applicant's academic and research potential. Applicant credentials should be submitted before 1 March 1987 to ensure consideration. For application information contact: The Director, Fellowship Program, Graduate School—New Brunswick, Rutgers University, 25 Bishop Place, New Brunswick, New Jersey 08903, or telephone: 201-932-7034. Equal Opportunity/Affirmative Action Institution.

POSTDOCTORAL FELLOWSHIPS IN HEALTH PSYCHOLOGY RESEARCH

The Department of Psychology at Yale University expects to have available two NIMH-funded postdoctoral fellowships in Health Psychology Research Training beginning 1 July 1987. Core psychology faculty includes Judith Rodin, Jerome Singer, Allan Wagner, Patricia Linville, and Roger Weissberg. Applicants are expected to have exhibited (or shown clear promise of) excellence in research. Applicants should send a letter of application with a description of research interests, a résumé, papers and reprints, and arrange for three letters of recommendation to be sent to: Gary E. Schwartz, Director, Postdoctoral Training Program in Health Psychology Research, Department of Psychology, Yale University, Box 11A Yale Station, New Haven, CT 06520. Deadline for completed applications: 2 February 1987. Yale is an Equal Opportunity/Affirmative Action Employer and applications from women and minority group members are especially encouraged.

TROPICAL FOREST BIOLOGY THE SMITHSONIAN TROPICAL RESEARCH INSTITUTE (STRI) ANNOUNCES A 3-YEAR POSTDOCTORAL FELLOWSHIP

Applications are welcome from candidates interested in the study of the ecology, evolution, or behavior of plants, animals, or the relationships between plants and animals. The successful candidate is expected to reside in the Republic of Panama and base his/her studies at STRI research facilities. Proposals that include a component of comparative work in other tropical nations will also be considered.

Applications including a detailed research proposal, a curriculum vitae, two letters of reference, names and telephone numbers of three additional professional references, and reprints of publications should be postmarked by 20 February 1987 and sent to:

Chairman, Postdoctoral Search Committee
Smithsonian Tropical Research Institute
APO Miami 34002-0011

The beginning stipend is \$20,000 with travel and up to \$5,000 research funds for the first year. Finalists may be invited to Panama for an interview.

Research

...to build a better tomorrow

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

MOLECULAR BIOLOGY

We currently have several positions available for highly motivated, talented research associates to take part in our molecular biology research. You should have a BS or MS degree in Biology or related field, a minimum of two years' experience in molecular biology to include cDNA cloning, mRNA purification and fractionation, oocyte injection, and in vitro translation. Familiarity with computer programming desirable.

PROTEIN CHEMISTRY

We currently have an opening for a talented research associate to join our group working on the structural characterization of recombinant DNA proteins. The ideal candidate will have a BS or MS degree in Biochemistry or related science with expertise in amino acid analysis, peptide mapping and gas phase sequencing of proteins. A background in exploring functional domains in enzymes and glycoprotein hormones would be helpful.

PROJECT MANAGER

We have an opening for a project manager to coordinate the scientific and business interactions of our research projects. Major responsibilities include: facilitating, analyzing and coordinating project resources, troubleshooting and client communication in order to maximize project progress and provide oversight. The successful candidate will have a BS or MS degree in science or related field and a MBA or equivalent with a minimum of one year project management experience in biotechnology or a related industry.

PROTEIN CHEMISTRY

We have an immediate opening for an experienced protein chemist who will focus on the structural characterization of recombinant proteins. The position requires a Ph.D. in Biochemistry with 0-3 years of postdoctoral experience. The ideal candidate will have demonstrated the ability to design strategies for determining protein structure using chemical and enzymatic cleavage procedures, peptide mapping, automated Edman degradation and amino acid analysis. A background in exploring functional domains in enzymes and/or glycoprotein hormones by chemical, physical or immunological means is also desirable. Industrial experience in the characterization of recombinant proteins for human therapeutic use would be helpful. Candidates with extensive postdoctoral experience directing independent research projects are also invited to apply and be considered for a lab head position.

MAMMALIAN CELL CULTURE

An opening exists for a Ph.D. scientist or engineer to join our mammalian cell culture group. This group's main responsibilities are optimization of expression systems and development of large scale cell culture processes for the production of heterologous proteins from recombinant mammalian cells. The successful candidate would be involved in addressing concepts of experimental cell biology germane to large scale cell culture. Candidates should have a Ph. D. in relevant discipline (cell biology/biochemistry/biochemical engineering/microbiology) ideally with some postdoctoral industrial experience.

Genetics Institute offers a stimulating scientific environment in addition to excellent salary, equity participation and a complete benefits package.

Qualified candidates should forward their resumes, in confidence, to Barbara Covell, Personnel Manager, Genetics Institute, 87 CambridgePark Drive, Cambridge, MA 02140.

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The Fisher Biotechnology Group announces the introduction of a growing line of FisherBiotech immunological reagents, available January 1987. Produced for Fisher by Southern Biotechnology Associates Inc.

Polyclonal antibodies are affinity purified for superior activity, specificity and binding affinity. They're available unlabeled or conjugated with the fluorochrome labels fluorescein isothiocyanate, tetramethylrhodamine isothiocyanate, Texas Red™ and R-phycoerythrin. With the enzyme labels alkaline phosphatase, β -galactosidase and horseradish peroxidase. Or with biotin.

Monoclonal antibodies for both human and veterinary research come highly purified or in supernatant and ascites form. Three separate clonotyping systems allow the screening and characterization of murine hybridomas.

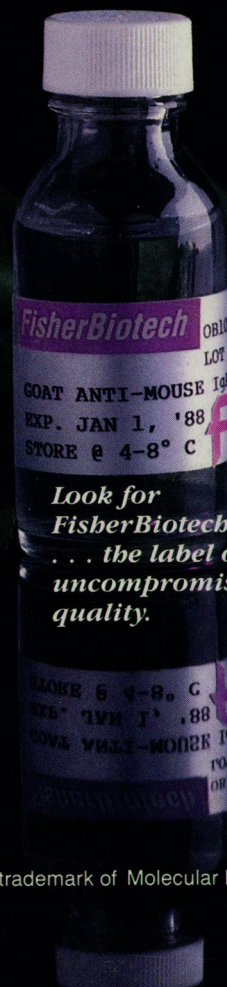
Of course, every reagent is backed by the Fisher tradition of quality and service, including applications support specialists and a dedicated technical hotline: 1-800-431-1861.

For literature on the new FisherBiotech immunological reagents as well as products for electrophoresis, molecular biology, cell biology and fermentation/bioprocessing, please use the reader reply card; write us at 711 Forbes Avenue, Pittsburgh, PA 15219; or call 412-562-8543.



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