

bons, and they inhabit tropical forests of continental Southeast Asia and some islands (Borneo, Java, Sumatra, and the Mentawai Islands). During the 20th century they have attracted scientific interest for two major reasons. First, their locomotor behavior of brachiation and their postcranial morphology are very different from those of quadrupedal primates and have been interpreted by some as preadaptive for the evolution of orthograde posture and associated morphological features in humans. Second, gibbons are remarkable for a complex of social traits that are rare in mammals: monogamy, territoriality, and elaborate songs, including duets by members of mated pairs.

The present volume is a largely successful attempt to make the latest results of specialized research available in a convenient form for diverse users. Most of its 46 chapters are by participants in a 1980 conference. Others were solicited by the editors after the conference to fill gaps in the coverage. The contributions are arranged in five groups: Conservation, Functional Morphology, Ecology, Social Behavior, and Evolutionary Biology.

The biomechanics of brachiation is elucidated in a mathematical analysis by H. Preuschoft and B. Demes, who demonstrate that brachiation at moderate speeds corresponds well to a pendulum model and that the long forelimbs of gibbons thus serve to increase velocity. Tail-arm brachiation of New World spider monkeys (*Ateles*) has a more irregular rhythm owing to movements of the tail, so one might infer that Preuschoft and Demes's conclusion that moderate-speed gibbon brachiation conserves energy is not necessarily contradicted by the frequently cited results of P. E. Parsons and C. R. Taylor (1977) showing that brachiation of *Ateles* is energetically more expensive than quadrupedal movement by the same animal.

W. L. Jungers and J. T. Stern, Jr., contribute what will undoubtedly become a classic, on kinesiological aspects of brachiation. They used simultaneous video recording and telemetered electromyography of forelimb muscles to analyze with admirable lucidity just what a gibbon is doing with its limb segments and muscles throughout the different phases of brachiation. The forelimb muscles used in brachiation are more active in vertical climbing, when the animal cannot use gravity to its advantage, and Jungers and Stern conclude that "given the relatively great demands placed on these muscles during climbing, an animal that is well adapted for scansorial behaviours is probably preadapted for some degree of arm-swinging as well" (p. 134).

Progress in understanding gibbon sociality does not come easily. This is demonstrated

in a comprehensive discussion by W. Y. Brockelman and S. Srikosamatara, starting with the important point that clarification of selective factors operating on social systems requires knowledge of the proximate behavioral mechanisms that maintain the systems. Brockelman and Srikosamatara attempt to elucidate proximate causes by comparing intergroup behaviors across gibbon species, but this proves unsuccessful for a variety of reasons, including the small intraspecific sample sizes imposed by various aspects of gibbon biology. With respect to vocal behavior, which is undoubtedly extremely important in regulating social relations, experimental playbacks are a promising approach, and it is unfortunate that this book was completed too early to include J. C. Mitani's rigorously designed field experiments with Bornean gibbons. After a thorough review of the available (albeit inadequate) evidence, Brockelman and Srikosamatara suggest that in hylobatids females are the more important sex in maintaining monogamy and that the degree of dietary specialization seen in these primates may favor their form of social life by reducing the importance of interspecific competition, thereby increasing the benefits of intraspecific defense of resources. Finally, Brockelman and Srikosamatara's own fieldwork in a *Hylobates lar*-*H. pileatus* hybrid zone in Thailand has revealed some interesting *lar*-*pileatus* trios containing one adult male and two adult females; in such groups only one female is reproductively active.

The evolutionary history of gibbons is murky. Although in recent years many fossil apes have been dubbed ancestral gibbons, J. G. Fleagle concludes that "aside from the dental remains of extant species from the last million years or so in China and south-east Asia, there are no convincing fossil gibbons" (p. 443). Possible candidates are early Miocene *Micropithecus* from East Africa and *Dionysopithecus* from China, but more fossils are needed.

The goal of the 1980 conference to stimulate fruitful debate was clearly realized with respect to classification and phylogenetic reconstruction. There is general agreement that extant hylobatids can be divided into three groups (subgenera): *H. syndactylus* (the siamang), *H. concolor*, and the rest (including the problematical lar group of species or populations). Molecular clock methods are used by J. E. Cronin, V. M. Sarich, and O. Ryder to suggest that the three groups split apart about 4 to 5 million years ago, whereas the lar group differentiated much more recently, probably within the last million years. Cronin *et al.* suggest that speciation by chromosomal evolution may have been involved in the initial tripartite

split, but not within the lar group. In the lar group, characters of pelage, song, and cranial morphology do not covary consistently, leading to different numbers of species (one, four, or five in this volume) according to which characters are considered most important by the investigator. The comprehensive and diverse chapters of this section convince one that gibbon phylogeny and classification constitute one of the really exciting topics in primate biology and mammalian systematics, and a final brief summary by the book's editors provides a useful list of topics worthy of further research in this area.

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## Books Received

**Cloning of Frogs, Mice, and Other Animals.** Robert Gilmore McKinnell. University of Minnesota Press, Minneapolis, 1985. xii, 127 pp., illus. \$12.95. Revision of *Cloning: A Biologist Reports* (1979).

**Clustering Aspects of Nuclear Structure.** J. S. Lilley and M. A. Nagarajan, Eds. Reidel, Boston, 1985 (distributor, Kluwer Boston, Hingham, MA). xii, 420 pp., illus. \$54. From a conference, Chester, United Kingdom, July 1984.

**The Cognitive Computer.** On Language, Learning, and Artificial Intelligence. Roger C. Schank with Peter Childers. Addison-Wesley, Reading, MA, 1985. xiv, 268 pp. Paper, \$12.95. Reprint, 1984 edition.

**Common Seaweeds of China.** C. K. Tseng, Ed. Science Press, Beijing, and Kugler, Berkeley, CA, 1984. x, 316 pp., illus. \$125.

**Explanation, Causation and Deduction.** Fred Wilson. Reidel, Boston, 1985 (distributor, Kluwer, Hingham, MA). xviii, 385 pp. \$49. University of Western Ontario Series in Philosophy of Science, vol. 26.

**Exploitation of Physiological and Genetic Variability to Enhance Crop Productivity.** James E. Harper, Lawrence E. Schrader, and Robert W. Howell, Eds. American Society of Plant Physiologists, Rockville, MD, 1985. viii, 92 pp., illus. Paper, \$12. From a symposium, Champaign-Urbana, IL, Oct. 1984.

**Explosive Remnants of War.** Mitigating the Environmental Effects. Arthur H. Westing, Ed. Published for the Stockholm International Peace Research Institute and the United Nations Environment Programme by Taylor and Francis, Philadelphia, 1985. xvi, 141 pp. \$25. From a meeting, Geneva, July 1983.

**Fiber Optics.** Technology and Applications. Stewart D. Personick. Plenum, New York, 1985. xii, 257 pp. illus. \$45. Applications of Communications Theory.

**Flying Squirrels.** Gliders in the Dark. Nancy Wells-Gosling. Smithsonian Institution Press, Washington, DC, 1985. 128 pp., illus. \$24.95; paper, \$9.95. A Smithsonian Nature Book.

**Forest Trees of Australia.** D. J. Bolland *et al.*, 4th ed. Nelson, Melbourne, Australia, and CSIRO, East Melbourne, Australia, 1984 (U.S. distributor, ISBS, Beaverton, OR). xvi, 687 pp., illus. \$49.95.

**Formaldehyde.** Analytical Chemistry and Toxicology. Victor Turoska, Ed. American Chemical Society, Washington, DC, 1985. xiv, 393 pp., illus. \$89.95. Advances in Chemistry Series, 210. From a symposium, St. Louis, April 1984.

**From Invention to Innovation.** Long-Distance Telephone Transmission at the Turn of the Century. Neil H. Wasserman. Johns Hopkins University Press, Baltimore, 1985. xxvi, 162 pp., illus. \$17.50. The Johns Hopkins/AT&T Series in Telephone History.

**From Maxwell to Microphysics.** Aspects of Electromagnetic Theory in the Last Quarter of the Nineteenth Century. Jed Z. Buchwald. University of Chicago Press, Chicago, 1985. xvi, 339 pp., illus. \$70.

**Frontiers in Histamine Research.** A Tribute to Heinz Schild. C. Robin Ganellin and Jean-Charles Schwartz, Eds. Pergamon, New York, 1985. xvi, 442 pp., illus. \$80. Advances in the Biosciences, vol. 51. From a symposium, Jouy-en-Josas, France, July 1984.

**Health and Disease in the Prehistoric Southwest.** Charles F. Merbs and Robert J. Miller, Eds. Arizona State University Department of Anthropology, Tempe, 1985. xxii, 404 pp., illus. Paper, \$17.50. Arizona State University Anthropological Research Papers, no. 34.

**High-Energy Physics.** In Honor of P. A. M. Dirac in His Eightieth Year. Behram Kursunoglu, Stephan L. Mintz, and Arnold Perlmutter, Eds. Plenum, New York, 1985. x, 270 pp., illus. \$47.50. Studies in the Natural Sciences, vol. 20. From a meeting, Miami, Jan. 1983.

**High Technology, Space, and Society.** Manuel Castells, Ed. Sage, Beverly Hills, CA, 1985. 320 pp. \$29.95; Paper, \$14.95. Urban Affairs Annual Reviews, vol. 28.

**HLA and Disease Associations.** Jawahar L. Tiwari and Paul I. Terasaki. Springer-Verlag, New York, 1985. xxiv, 471 pp., illus. \$65.

**Instabilities in Continuous Media.** L. Knopoff, V. I. Keilis-Borok, and G. Puppri, Eds. Birkhäuser, Boston, 1985. iv + pp. 361-572, illus. Paper, \$34.95. Reprinted from *Pure and Applied Geophysics*, vol. 121, no. 3. From a workshop, Venice, Nov. 1982.

**The Living Tundra.** Yu. I. Chernov. Cambridge University Press, New York, 1985. xiv, 213 pp., illus. \$49.50. Studies in Polar Research. Translated from the Russian edition (1980) by D. Löve.

**Localization and Metal-Insulator Transitions.** Hellmut Fritzsche and David Adler, Eds. Plenum, New York, 1985. xiv, 533 pp., illus. \$75. Institute for Amorphous Studies Series.

**Logoworlds.** Rachelle S. Heller, C. Dianne Martin, and June L. Wright. Computer Science Press, Rockville, MD, 1985. xiv, 301 pp., illus. Spiral bound, \$19.95. Computers in Education Series.

**Long Distance Propagation of HF Radio Waves.** A. V. Gurevich and E. E. Tsedilina. Springer-Verlag, New York, 1985. xii, 344 pp., illus. \$79. Physics and Chemistry in Space, vol. 12. Translated from the Russian.

**Love and Tradition.** Marriage Between Jews and Christians. Egon Mayer. Plenum, New York, 1985. 311 pp. \$17.95.

**Low Achieving Children.** The First Seven Years. Sarah Broman, Ellen Bien and Peter Shaughnessy. Erlbaum, Hillsdale, NJ, 1985. xiv, 170 pp. \$19.95.

**The Making of the Earth.** Richard Fifield, Ed. New Scientist, London, and Basil Blackwell, New York, 1985. xvi, 336 pp., illus. \$25.95; paper, \$8.95. A New Scientist Guide.

**Mammalian Cell Transformation.** Mechanisms of Carcinogenesis and Assays for Carcinogens. J. Carl Barrett and Raymond W. Tennant, Eds. Raven, New York, 1985. xviii, 461 pp., illus. \$64. Carcinogenesis, vol. 9. From a symposium, Research Triangle Park, NC, Sept. 1984.

**Medical Malpractice.** Theory, Evidence, and Public Policy. Patricia M. Danzon. Harvard University Press, Cambridge, MA, 1985. viii, 264 pp. \$17.50.

**Membrane Fluidity in Biology.** Vol. 3, Disease Processes. Roland C. Aloia and Joan M. Boggs, Eds. Academic Press, Orlando, FL, 1985. xiv, 316 pp., illus. \$64.50.

**Metric Linear Spaces.** Stefan Rolewicz. Reidel, Boston, and PWN—Polish Scientific Publishers, Warsaw, 1985 (distributor, Kluwer, Hingham, MA). xii, 459 pp. \$79. Mathematics and Its Applications (East European Series).

**Micro and Macro Levels of Analysis in Anthropology.** Issues in Theory and Research. Billie R. DeWalt and Perti J. Peltó, Eds. Westview, Boulder, CO, 1985. xiv, 214 pp. Paper, \$17.95. Westview Special Studies.

**Molecular Basis of Nerve Activity.** J.-P. Changeux *et al.*, Eds. Walter de Gruyter, New York, 1985. xxiv, 784 pp., illus. \$118. From a symposium, Berlin, Oct. 1984.

**Molecular Biology of the Cytoskeleton.** Gary G. Borisy, Don W. Cleveland, and Douglas B. Murphy, Eds. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, 1984. xvi, 512 pp., illus. \$58. From a conference, Cold Spring Harbor, NY, April 1984.

**Multidimensional Systems Theory.** Progress, Directions and Open Problems in Multidimensional Systems. N. K. Bose, Ed. Reidel, Boston, 1985 (distributor, Kluwer, Hingham, MA). xvi, 264 pp. \$49.50. Mathematics and Its Applications.

**Nobel Prize Conversations.** With Sir John Eccles, Roger Sperry, Ilya Prigogine, Brina Josephson.

With a commentary by Norman Cousins. Saybrook, Dallas, 1985 (distributor, Norton, New York). xii, 210 pp., illus. \$14.95.

**The Noise Handbook.** W. Tempsest, Ed. Academic Press, Orlando, FL, 1985. xiv, 407 pp., illus. \$68.

**Nolo's Intellectual Property Law Dictionary.** Stephen R. Elias. Ralph Warner, Ed. Nolo Press, Berkeley, CA, 1985. x, 228 pp., illus. Paper, \$14.95.

**The Principles and Practice of Electron Microscopy.** Ian M. Watt. Cambridge University Press, New York, 1985. viii, 303 pp., illus. \$49.50.

**Principles of Behavioral Neurology.** M-Marcel Mesulam. Davis, Philadelphia, 1985. xviii, 405 pp., illus. \$55. Contemporary Neurology Series, 26.

**Principles of Plant Biotechnology.** An Introduction to Genetic Engineering in Plants. S. H. Mantell, J. A. Matthews, and R. A. McKee. Blackwell Scientific, Palo Alto, CA, 1985. vi, 269 pp., illus. Paper, \$19.95.

**Progress in Nickel Toxicology.** Stanley S. Brown and F. William Sunderman, Jr., Eds. Published for the International Union of Pure and Applied Chemistry by Blackwell Scientific, Palo Alto, CA, 1985. xx, 250 pp., illus. \$54. From a conference, Paris, Sept. 1984.

**Prolactin.** Basic and Clinical Correlates. Robert M. MacLeod *et al.*, Eds. Liviana Press, Padova, Italy, and Springer-Verlag, New York, 1985. xviii, 859 pp., illus. \$98.50. Fidia Research Series, vol. 1. From a congress, Charlottesville, VA, June 1984.

**The Promise of Tax Reform.** Prentice-Hall, Englewood Cliffs, NJ, 1985. viii, 207 pp. + appendix. Paper, \$7.95. American Assembly Books. From a meeting, Harriman, NY, April 1984.

**Submarine Fans and Related Turbidite Systems.** Arnold H. Bouma, William R. Normark, and Neal E. Barnes, Eds. Springer-Verlag, New York, 1985. xiv, 351 pp., illus. \$59. Frontiers in Sedimentary Geology.

**Supercomputer Applications.** Robert W. Numrich, Ed. Plenum, New York, 1985. viii, 307 pp., illus. \$52.50. From a symposium, West Lafayette, IN, Oct. 1984.

**Superforce.** The Search for a Grand Unified Theory of Nature. Paul Davies. Simon and Schuster, New York, 1985. vi, 255 pp., illus. Paper, \$8.95. Reprint, 1984 edition.

**Systematics and Biogeography of the Longicorn Beetle Tribe Tmesisternini.** J. Linsley Gressitt. Bishop Museum Press, Honolulu, 1984. iv, 263 pp., illus. Paper, \$23.50. Pacific Insects Monograph 41.

**The Systematics Community.** Stephen R. Edwards, George M. Davis, and Lorin I. Nevling. Association of Systematics Collections, Museum of Natural History, University of Kansas, Lawrence, 1985. iv, 275 pp. Spiral bound, \$20.

**The Telephone Enterprise.** The Evolution of the Bell System's Horizontal Structure, 1876-1909. Robert W. Garnet. Johns Hopkins University Press, Baltimore, 1985. xxvi, 212 pp., illus. \$22.50. The Johns Hopkins/AT&T Series in Telephone History.

**Tetrahedrally-Bonded Amorphous Semiconductors.** David Adler and Hellmut Fritzsche, Eds. Plenum, New York, 1985. xvi, 564 pp., illus. \$79.50.

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**A Theory of Action Identification.** Robin R. Vallacher and Daniel M. Wegner. Erlbaum, Hillsdale, NJ, 1985. viii, 259 pp., illus. \$29.95. Basic Studies in Human Behavior.

**Theory of Multiobjective Optimization.** Yoshikazu Sawaragi, Hirotaka Nakayama, and Tetsuzo Tanino. Academic Press, Orlando, FL, 1985. xiv, 296 pp., illus. \$48. Mathematics in Science and Engineering, vol. 176.

**Toxicology of Insecticides.** Fumio Matsumura. 2nd ed. Plenum, New York, 1985. xxii, 598 pp., illus. \$45.

**Trace Elements in Nutrition of Children.** Ranjit Jumar Chandra, Ed. Nestlé Nutrition, Vevey, and Raven, New York, 1985. xiv, 306 pp., illus. \$28.50. Nestlé Nutrition Workshop Series, vol. 8. From a workshop, Munich, Jan. 1984.

**Transmission Lines, Waveguides, and Smith Charts.** Richard L. Liboff and G. Conrad Dalman. Macmillan, New York, and Collier Macmillan, London, 1985. xvi, 269 pp., illus. \$37.95.

**Vision in Vertebrates.** M. A. Ali and M. A. Klyne. Plenum, New York, 1985. x, 272 pp., illus. \$45.

**The World Almanac Book of Inventions.** Valerie-Anne Giscard d'Estaing. World Almanac Publications, New York, 1985. iv, 362 pp., illus. Paper, \$10.95. Translated from the French edition.

**X-Rays.** Health Effects of Common Exams. John W. Gofman and Egan O'Connor. Sierra Club Books, San Francisco, 1985 (trade distributor, Random House, New York). viii, 440 pp., illus. \$25.

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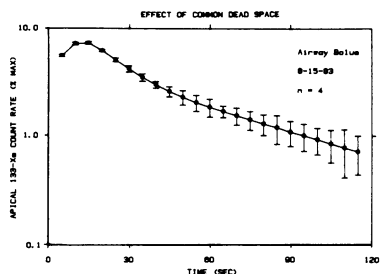
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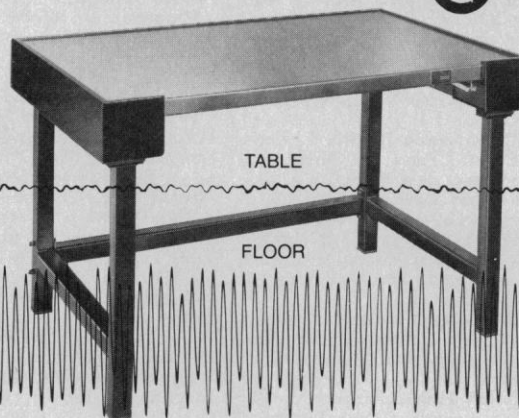
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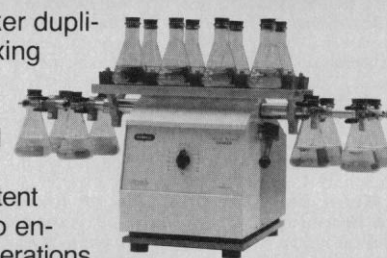
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*Filtration Separation and Life Science Research* is a reference guide and catalog of materials for nucleic acid and protein research, clinical research and diagnostics, chromatography sample and solvent preparation, and more. Schleicher & Schuell. Circle 535.

*Incubator-Shaker* describes the Mark X Range for biotechnology research applications. These units are floor-standing, top-loading orbital incubator-shakers with controlled temperature. LH Fermentation. Circle 537.

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## POSITIONS WANTED

**Anatomist, D.V.M., Ph.D.,** over 10 years of consecutive teaching experience in gross anatomy and neuroanatomy with postdoctoral research experience. Seeking faculty position. Excellent references. Box 275, SCIENCE.

1/3, 17, 31

**Cell Biologist, Ph.D. 1981.** Seeking scientific administration or management position. Excellent oral and written communication skills. Publications, teaching, supervisory, and grants experience. Box 266, SCIENCE.

X

**Cell/Molecular Biologist, Ph.D.** Four years of postdoctoral research experience includes recombinant DNA work. Highly knowledgeable and motivated with broad interests at basic and applied levels. Seeks challenging non-research position in industry. Box 277, SCIENCE.

1/3, 10, 17

**Environmental Analyst, M.S.,** 9 years of experience in natural resource evaluation, planning, management, and protection. Geoscience, civil engineering, and economics education. Seeks industry, research, or regulatory agency position. Box 279, SCIENCE.

X

**Surgical Physiologist, Ph.D.** Extensive research experience on interstitial fluid tissue pressures, compression-induced tissue damage, compartmental syndromes, trauma-induced tissue damage, compartmental syndromes, trauma-induced disseminated intravascular coagulation, gastrointestinal hormones, and peripheral neuroelectrodiagnostics. Available January 1986 for industry/academic/research. Box 280, SCIENCE.

1/3, 10

**Technician, Neurobiology.** Recent B.S. in zoology seeks research position in Chicago area. Highly motivated toward field with undergraduate neuro experience. Will consider other locations. Box 269, SCIENCE.

X

## POSITIONS WANTED

**Immunologist, Ph.D.** Senior scientist with extensive background in areas of hybridoma/monoclonal antibody development for use in cancer therapy and imaging, lymphokines, and cell mediated cytotoxicity. Expert tissue culturist, with superior communication, writing, and supervisory skills. Excellent publications and references. Seeking responsible position in industry or academic laboratory. Box 268, SCIENCE.

X

**Medical Assay Scientist/Manager.** Accomplished in electronic detection of biomolecules, drugs, and viruses. Strong professional standing; leadership, communication skills. Patents: publications. Seeking research directorship or entrepreneurship. Box 282, SCIENCE.

1/3, 10, 17

**Pathologist/Biostatistician.** Seeking medical research position in industry or academia. Interest is in applying mathematics to medical science, combining theoretical and experimental aspects. Experience in epidemiology, nutrition, computers, and management. Box 281, SCIENCE.

1/3, 10, 17, 24

**Pharmaceutical Chemist, Ph.D. (1972);** Diversified experience in medicinal, radioisotope synthesis, polymeric drugs, isolation, and metabolic study. Innovative and problem solver. Box 278, SCIENCE.

X

**Scientist (nonresident)** seeks position to work on novel discovery concerning phospholipid function. Short-term achievements and patents in molecular engineering/therapeutics, especially cancer treatment expected. Box 276, SCIENCE.

1/3, 10

## POSITIONS OPEN

**ACADEMIC COORDINATOR:** Appointee will serve as director of the Animal-Human Bond Program, School of Veterinary Medicine, University of California, Davis. Coordinator will nurture teaching, research, continuing education and service in the animal-human bond area. Position is 60 percent time; Ph.D. or equivalent in related field required. Administrative experience in area of animal-human bond necessary. Submit curriculum vitae and the names of three references to **Dr. Robert Hansen, Associate Dean-Student Services, School of Veterinary Medicine, University of California, Davis, California 95616.** Applications accepted through 17 January 1986 or until filled. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

### ANATOMIST

The Department of Anatomy seeks an individual to teach gross anatomy to a class consisting of medical, dental, and graduate students. Candidates should have had 3 years of postdoctoral experience and have an active program of research. At the earliest, the position will commence 1 July 1986, and preference will be given to applicants at the level of assistant professor. Send applications and names of three referees to: **Dr. Alan Peters, Chairman, Department of Anatomy, Boston University School of Medicine, 80 East Concord Street, Boston, MA 02118.** *Equal Opportunity Employer, M/F.*

### AQUATIC TOXICOLOGIST

The Department of Pathology, University of Maryland School of Medicine, is seeking an aquatic toxicologist at the research associate level for its aquatic pathobiology Program. Successful candidate will develop and maintain systems for culture of aquatic vertebrates and invertebrates, biological assays, and statistical evaluations related to aquatic toxopathology. Minimum requirements are a M.S. in toxicology with 3+ years of experience in toxicology. Application deadline is 15 February 1986. Address correspondence to: **Eric B. May, Ph.D., Department of Pathology, P.O. Box 21246, Catonsville, MD 21228.** *The University of Maryland at Baltimore is an Affirmative Action/Equal Opportunity Employer.*

**ASSISTANT PROFESSOR OF ANATOMY,** Academy of Health Sciences, Fort Sam Houston, Texas, is seeking an assistant professor to teach undergraduate and graduate level gross anatomy, neuroanatomy, and microscopic anatomy. Requirements include: Ph.D. in anatomy or M.S. with professional experience in anatomy instruction, at least 1 year of professional experience at the GS-11 level or its equivalent, and qualification for GS-12. For more information, call **Jan Coultrap;** telephone: 512-221-5452/5878.

## POSITIONS OPEN

**ASSISTANT DIRECTOR.** The Research Resources Center, University of Illinois at Chicago, has an opening effective early in 1986 for a highly qualified individual at the doctorate level. The center is a centralized facility with a staff of over 30 specialists for providing the campus with scientific services and the use of high technology equipment. Services include the design, construction, repair, and maintenance of all types of electronic and mechanical equipment. The technological equipment includes atomic absorption, mass and nuclear magnetic resonance spectrometers, hypobaric and psychrometric chambers, transmission and scanning electron microscopes, and scientific mini- and microcomputers. Required qualifications: strong background in biological/chemical/physical sciences and good interpersonal skills to assist in the administration of the center. Applications must be received by 1 February 1986. Send curriculum vitae and three letters of reference to: **Richard J. Labotka, M.D., Chairman, Search Committee, c/o Research Resources Center (m/c 937), P.O. Box 6998 Chicago, IL 60680**

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

The Department of Microbiology, University of Minnesota, Minneapolis Campus, invites applications for a 12-month, tenure-track appointment at the rank of **ASSISTANT PROFESSOR** working in the general area of the molecular pathogenesis of virus infections. Candidates must have an M.D., Ph.D., D.V.M., or D. Sci. degree with two or more years of postdoctoral research experience. The successful candidate will be expected to obtain extramural research funding and participate in departmental teaching responsibilities, including supervision of graduate students at the M.S. and Ph.D. levels. Please send a brief description of research interests and plans, curriculum vitae, and three letters of recommendation to: **Peter G. Plagemann, Chair, Virology Search Committee, Department of Microbiology, University of Minnesota Medical School, 421 Delaware Street, S.E., Box 196 Mayo, Minneapolis, MN 55455.** Last date for receipt of applications is 31 June 1986. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

### ERINDALE CAMPUS UNIVERSITY OF TORONTO DEPARTMENT OF ZOOLOGY

The Department of Zoology of the University of Toronto invites applications for an **ASSISTANT PROFESSOR** tenure-track position in cellular/molecular biology tenable at Erindale College. Teaching duties require contributions to undergraduate courses in microbiology, molecular biology, and/or cellular biology. Current base salary for assistant professor is \$27,000. This position involves an exceptionally well-equipped cell and molecular biology laboratory. Please send curriculum vitae and three letters of recommendation to: **Professor Glenn Morris, Search Committee Chairman, Zoology, Erindale College, Mississauga, Ontario, Canada, L5L 1C6.** Effective date of appointment is 1 July 1986; closing date for receipt of applications is 15 February 1986.

*In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.*

The Department of Biochemistry, University of Missouri-Columbia, announces a tenure-track opening at the **ASSISTANT PROFESSOR** level beginning in September 1986.

A number of additional openings at the assistant/associate level are anticipated for the 1987 year and beyond. We seek applicants with a high degree of research potential, regardless of the biochemical field of interest. In addition to developing a research program, the successful applicant will be expected to participate at a reasonable level in instructional programs of the department. The successful candidate will be provided with substantial funds to expedite a research program. Interested candidates should send curriculum vitae, a summary of research plans, and the names of three references by 28 February 1986 to:

**Chair, Search Committee  
Biochemistry Department  
M121 Medical Science Building  
University of Missouri-Columbia  
Columbia, MO 65212**



## POSITIONS OPEN

**ASSISTANT DIRECTOR**—Research assistant/associate rank; 12-month, renewable appointment; \$30,000—\$40,000. Duties include preparation of RFP's; administration and monitoring of research grants; budget preparation; interaction with Institute Advisory Council. Earned Ph.D. degree and/or equivalent; expertise in coostally oriented science; experience in finance, marketing, or business; superior oral, written, and interpersonal skills. Résumé and three letters of recommendation must be received by 1 February 1986. Send to: Thomas J. Maginnis, Director, National Coastal Resources Research and Development Institute, Hatfield Marine Science Center, Oregon State University, Newport, OR 97365. For more information, telephone 503-867-3011. *Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of The Rehabilitation Act of 1973.*

**ASSISTANT PROFESSOR—ANATOMY**. Full-time faculty position to teach embryology, gross anatomy (head and neck), and assist the supervision of department laboratories. Excellent benefits. Forward curriculum vitae to: Los Angeles College of Chiropractic Personnel Dept., 16200 Amber Valley Drive, Whittier, CA 90604.

### ASSISTANT PROFESSOR—BIOCHEMISTRY

Applications and nominations are invited for a tenure-track faculty position in the biochemistry section of the Department of Chemistry at the University of South Carolina. The biochemistry section also serves as the biochemistry unit in the medical school; the position includes a joint appointment (12 months) in the School of Medicine. Applicants should have postdoctoral experience, a record of productive research, and a strong commitment to both teaching and research. Research area: open. Start date: summer 1986. Senior candidates with outstanding credentials are invited to apply for a higher level appointment. Send curriculum vitae, one page statements of (i) research accomplishments and (ii) research plans, and three letters of recommendation to: Dr. John W. Baynes, Biochemistry Search Committee, Department of Chemistry, University of South Carolina, Columbia, SC 29208. Deadline for receipt of all materials: 31 January 1986. *Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT RESEARCH SCIENTIST IN BIOENGINEERING**. The person filling this position will be responsible for management of bioengineering activities of the bioconversion research laboratory studying production of methane and other chemicals from biomass and wastes. The person will be responsible for management of activities including bench-to-pilot scale process development, optimization, analysis and design, and integration with overall systems analysis. The person will be directly involved in proposal and report preparation and oral presentation of research results. The applicant must have a Ph.D. in engineering and experience in anaerobic digestion at the bench and pilot-scale and experience in report and proposal preparation. The position will be available 1 January 1986. This position does not accrue tenure. *The University of Florida is an Equal Opportunity Employer and invites applications from all qualified candidates.* Applications, including curriculum vitae and three letters of reference should be sent to: Dr. David P. Chynoweth, Ph.D., Department of Agricultural Engineering, 102 Frazier Rogers Hall, University of Florida, Gainesville, FL 32611.

**POSTDOCTORAL POSITION** to study reactor design, optimization, modeling, and process control for anaerobic digestion of biomass and wastes. Degree in engineering required, with experience in bioengineering aspects of anaerobic digestion. Position available beginning 1 January 1986 for 2 years. Send curriculum vitae and names of three references to: Dr. David P. Chynoweth, Agricultural Engineering Department, Rogers Hall, University of Florida, Gainesville, FL 32611.

**POSTDOCTORAL POSITION** to study the microbiology of hydrolysis of cellulose and other polymers in the methane fermentation of biomass and wastes. Experience with anaerobic bacteria and hydrolysis reactions preferred. Position available beginning 1 January 1986 for 2 years. Send curriculum vitae and names of three references to: Dr. David Chynoweth, Agricultural Engineering Department, Rogers Hall, University of Florida, Gainesville, FL 32611.

## POSITIONS OPEN

### ASSISTANT OR ASSOCIATE PROFESSOR

Excellent academic opportunity for M.D./Ph.D. researcher in new, basic brain science program bearing on psychiatric disorders (molecular level research preferable). Must have demonstrated skills in basic research and be credentialed in psychiatry (minimum: Board-eligible). Funding available: personal salary, laboratory equipment, and start-up salaries. Some teaching and minimal clinical duties. Curriculum vitae and sample papers to: K. Z. Altshuler, M.D., University of Texas Health Science Center, Department of Psychiatry, 5323 Harry Hines, Dallas, TX 75235-9070. *An Equal Opportunity Employer/University.*

**ASSISTANT PROFESSOR—BIOLOGY EDUCATION**. Emporia State University invites applications from persons with qualifications and expertise in biology education. The successful applicant will supervise the teacher education program. He/she will serve as liaison with biology teachers in the public schools of Kansas and will be expected to be active in state and national science teaching organizations. Qualifications include the Ph.D. in a biological discipline, secondary public school teaching experience, and a commitment to excellence in teaching and scholarly activities. This person will also be expected to teach an introductory level biology course, the biology methods course for prospective teachers, and an upper level biology course. This is a tenure-track position. Beginning date of employment is 18 August 1986 with the possibility of some summer employment. Send cover letter, curriculum vitae, and names of three references by 3 February 1986 to: Dr. Gaylen Neufeld, Division of Biological Sciences, Emporia State University, Emporia, KS 66801. *An Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT PROFESSOR PLANT BIOCHEMISTRY OHIO STATE UNIVERSITY

The Department of Biochemistry at The Ohio State University invites applications for a tenure-track faculty position in any area of plant biochemistry at the level of assistant professor. We seek an individual who will establish an active, original research program, and teach general and plant biochemistry at the graduate and undergraduate levels. Candidates should have a Ph.D. postdoctoral experience, and a strong record of research productivity. Please submit a résumé and a concise statement of research interests, and arrange for three letters of recommendation, to be sent to: Faculty Search Committee, Department of Biochemistry, 484 West 12 Avenue, Columbus OH 43210. Review of applications will begin 1 March. *The Ohio State University is an Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT/ASSOCIATE PROFESSOR PHARMACOLOGY AND TOXICOLOGY

Ph.D. who is dedicated to developing an independent research program in the areas of toxicology and/or pharmacology. Postdoctoral experience required. Please send curriculum vitae, statement of research and teaching objectives, and three letters of recommendation to: Dr. Charles O. Rutledge, Department of Pharmacology and Toxicology, School of Pharmacy, University of Kansas, Lawrence, Kansas 66045. *Affirmative Action/Equal Opportunity Employer.*

### ASSISTANT PROFESSOR PHYSIOLOGIST

**THE DEPARTMENT OF BIOLOGICAL SCIENCES** at the University of Wisconsin-Milwaukee announces a tenure-track position in **PHYSIOLOGY**. We seek an individual whose research interests will complement those of existing faculty in cardiovascular and/or endocrine physiology. The successful candidate is expected to establish an active extramurally supported research program. Postdoctoral experience preferred. Teaching responsibilities are human anatomy and physiology courses and an upper level course in the candidate's area of expertise.

Applicants must provide curriculum vitae, a concise statement of research and teaching objectives, recent reprints, and have three letters of recommendation sent to: Chair, Search Committee for Physiologist, Department of Biological Sciences, University of Wisconsin-Milwaukee, P.O. Box 413, Milwaukee, WI 53201. Closing date: 15 February 1986.

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

## Computational Drug Design

The Analytical, Physical, and Structural Chemistry Department of SK&F Laboratories is seeking Ph.D. level computational chemists for its computational drug design group. The primary function of the group is to design and implement computational modeling studies in support of SK&F research groups. Members of this group interact with medicinal and physical chemists who are themselves also active in computer assisted molecular modeling.

Successful candidates will have experience and/or interest in at least one of the following areas:

- Molecular mechanics, molecular dynamics and the underlying physical chemistry of molecular modeling.
- Structural analysis of conformationally flexible molecules of intermediate size.
- Conformation of biological macromolecules.
- Applications of molecular modeling to problems involving enzyme-substituent or hormone-receptor interactions.
- Incorporation of physicochemical experimental data to molecular modeling.

Position levels commensurate with experience and scientific record. Scientific publication will be encouraged and expected.

Presently located in Philadelphia, the Department will be relocating to a new, state-of-the-art research complex only minutes away near Valley Forge. We offer an excellent salary, benefits, and relocation package as well as opportunities for personal and professional growth. Please forward your c.v. to George P. Kissell, Jr., Manager, Personnel Relations, SK&F Laboratories, 1588 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.

**SK&F**  
A SmithKline Beckman Company



### Postdoctoral Fellowship in Cell and Molecular Biology of the Skin

#### University of Rochester

Postdoctoral fellowship (postgraduate Ph.D. scientist) in cell and molecular biology of the skin is available immediately in the Dermatology Unit, The University of Rochester School of Medicine and Dentistry. The Fellow will conduct original research into the effects of various insults (UV radiation, chemicals) on whole skin and isolated skin cell populations complementing current expertise in monoclonal antibodies and cell culture systems. Send curriculum vitae and references to:

**Lowell A. Goldsmith, M.D.**  
University of Rochester Medical Center  
P.O. Box 697, Dermatology Unit  
Rochester, NY 14642

The University of Rochester is an equal opportunity, affirmative action employer.

## POSITIONS OPEN

**ASSISTANT OR ASSOCIATE PROFESSOR.** Tenure-track position. Ph.D. degree required. Applicants should have a demonstrated record of excellence in research and an interest in teaching at the undergraduate and graduate levels. Preference will be given to individuals with background and experience in analytical or experimental techniques relevant to current research activities within the department. These include fission reactor physics and engineering, thermal-hydraulics, system simulation and modeling, stochastic processes, plasma physics, fusion and plasma engineering, nuclear materials, safety analysis, including risk assessment. Please supply a current résumé, list of publications, informal transcript if a recent graduate, and the names of three persons who can serve as professional referees to: **The Chairman, Search Committee, Department of Nuclear Engineering, 303 Benson Hall, The University of Washington, Seattle, Washington 98195.** *An Equal Opportunity/Affirmative Action Employer.*

### ASSOCIATE/ASSISTANT PROFESSOR OF OBSTETRICS AND GYNECOLOGY

The Department of Obstetrics and Gynecology, College of Medicine, University of Vermont, invites applications for a tenure-track faculty position. Candidates must have a Ph.D. and postdoctoral experience in physiology, pharmacology, or related field with demonstrable research and teaching accomplishments. Preference will be given to applicants with research experience in cardiovascular physiology or pharmacology. Interested individuals should submit curriculum vitae, a list of three professional references, and a brief statement of research interests by 30 January 1986 to: **Daniel H. Riddick, M.D., Ph.D., Chairman, Department of Obstetrics/Gynecology, MFU Patrick 541, Medical Center Hospital of Vermont, Burlington, VT 05401.** *Women and minorities are encouraged to apply.*

**ASSISTANT PROFESSOR—MICROBIAL PHYSIOLOGY.** Tenure-track position available in the area of bacterial/yeast physiology or bacterial/yeast fermentation for a person with a Ph.D. degree and at least 1 year of relevant postdoctoral experience. The successful candidate will be expected to develop an active externally funded graduate research program and to teach courses in bacterial physiology and the area of specialization. To apply, send curriculum vitae, recent reprints, and a letter stating salary requirements, general research area, special equipment needs, and the names of three referees to: **Dr. Edward A. Birge, Chair, Physiologist Search Committee, Department of Botany and Microbiology, Arizona State University, Tempe, AZ 85287.** Deadline for application 1 February 1986. *An Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT PROFESSOR-ZOOLOGY

The Biology Department of Mills College invites applications for a tenure-track position from vertebrate zoologists with strengths in ecology, evolution, and population biology. Teaching responsibilities include ecology, evolution, population biology, vertebrate biology, and part of general biology. Doctorate required. Preference given to applicants with demonstrated success in college level teaching. Mills College is a liberal arts college for women located in the San Francisco Bay Area. Position available 1 July 1986. Send curriculum vitae, and three letters of reference by 1 February to: **Dr. Karen C. Swearingen, Biology Department, Mills College, Oakland, CA 94613.**

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

**BIOLOGY:** Baldwin-Wallace College is seeking an **ECOLOGIST** prepared to teach a course in ecology for biology majors, a nonmajor course in field biology, and a third course to be determined. All courses are at the undergraduate level. Excellence in teaching is required and research is encouraged. Candidates must have a Ph.D.

The opening is for a 3-year, nontenure-track position available 1 September 1986. Baldwin-Wallace College is a private, liberal arts, 4-year institution with 1875 full-time and 1353 part-time students enrolled in day, evening, and weekend programs. Applications, including a résumé, transcripts, and three letters of recommendation should be sent to: **Dr. Stephen D. Hillard, Chairman, Biology Department, Baldwin-Wallace College, Berea, Ohio 44017.** Salary dependent on qualifications. *Equal Opportunity Affirmative Action Employer.* Deadline for receipt of applications is 1 February 1986.

## POSITIONS OPEN

**ASSISTANT PROFESSOR OF BIOLOGY** for a tenure-track position to begin September 1986. Teaching will be a combination of introductory and upper division courses in such specialties as microbiology, development, or molecular genetics. Teaching in interdisciplinary programs and research that can involve undergraduates are both encouraged. Ph.D. is required. Send curriculum vitae, a summary of academic training, a brief statement of teaching and research interests, and the names of three references to: **Dr. John Shepherd, Biology Department, College of Liberal Arts, Mercer University, Macon, GA 31207.** *Women and minority candidates are especially welcome. Mercer University is an Equal Opportunity Employer.* Application deadline is 31 January 1986.

**ASSISTANT PROFESSOR—GEOCHEMISTRY:** Permanent position to start August 1986 at small, public, liberal arts college. Applicants must have Ph.D. in geochemistry, chemistry, or geology and be committed to undergraduate teaching. Teaching includes introductory geology and chemistry courses and advanced courses in geochemistry or related areas. Forward résumé, transcripts, statement of teaching interests, and three letters of reference by 17 February 1986 to: **Dr. R. Goldsmith, Geochemist Search Committee, St. Mary's College of Maryland, St. Mary's City, MD 20686.** *Affirmative Action/Equal Opportunity Employer.*

**BIOCHEMIST-ENDOCRINOLOGIST:** Utilize biochemical and endocrinological concepts in conducting vitamin D, calcium, and parathyroid metabolic research to explore cutaneous vitamin D synthesis, hydroxylation, and regulation. Ph.D. (biochemistry) and expertise in HPLC, protein and lipid biochemistry, cell culture, enzymology, metabolic, and radioisotope techniques required. Salary: \$27,500 per year. Send résumé to: **Dr. Peter M. Elias, Dermatology Service (190), University of California (Veterans Administration), 4150 Clement Street, San Francisco, CA 94121.** *Equal Opportunity Employer.*

### BIOLOGY

Assistant professor, tenure track to begin 1 September 1986. Ph.D. The department is seeking an individual who has a broad background in developmental biology using modern cellular, molecular, and/or genetic approaches to investigate problems in differentiation or development. Develop and teach upper division lecture/laboratory courses in the area of developmental biology and one other course in a related area of interest, for example, reproductive biology or molecular evolution. Share teaching of lower division biology sequence and eventually contribute to Core Studies program for nonmajors. Lewis and Clark College is a private liberal arts college with approximately 1500 undergraduates enrolled in 23 academic departments and several interdisciplinary programs. Applicants should demonstrate commitment to quality undergraduate teaching and a continuing program of scholarly inquiry. Applications must include: (i) a letter of application including a statement of educational philosophy and career goals; (ii) curriculum vitae; (iii) a syllabus that would be used in a developmental biology course; (iv) three letters of reference. Applications must be received by 15 February 1986. Submit to: **Steven Seavy, Chair, Biology Department, Lewis and Clark College, Portland, Oregon 97219.** Telephone: 503-293-2726. *Lewis and Clark is an Equal Opportunity Employer and encourages the application of women and minority candidates.*

**DEPARTMENT CHAIR:** The Department of Chemistry at the University of Maryland Baltimore County (UMBC) invites applications and nominations for the position of department chair. The chair will be expected to provide vigorous leadership for a growing department of 17 faculty. The department offers Ph.D. degrees in both chemistry and biochemistry and applications are invited from internationally recognized scholars in any area of these disciplines who have a commitment to quality teaching at both the undergraduate and graduate levels. UMBC is located in suburban Baltimore about 35 miles from Washington, DC. To apply, send a résumé and the names of three persons who can be contacted for supporting letters to: **Dr. R. M. Pollack, Department of Chemistry, UMBC, 5401 Wilkens Avenue, Catonsville, MD 21228.** *UMBC is an Equal Opportunity/Affirmative Action Employer, and applications from qualified women and minority candidates are welcomed.*

## POSITIONS OPEN

### FACULTY OF PHARMACY UNIVERSITY OF TORONTO ASSISTANT OR ASSOCIATE PROFESSOR (tenure track) in Medicinal Chemistry

Applications are invited for the above post beginning 1 September 1986. Although a professional degree in pharmacy is preferred, a Ph.D. with postdoctoral experience is required. The successful candidate is expected to develop an active research program in medicinal chemistry or in an area allied to the main research interests of the faculty (for example, drug metabolism, toxicology, analysis) and to participate in teaching, at the undergraduate and graduate levels, in the program of medicinal chemistry.

*In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and landed immigrants.*

Send curriculum vitae and a brief (one or two paragraphs) outline of future research interests, and arrange for three letters of reference, by 1 March 1986 to:

**The Dean  
Faculty of Pharmacy  
University of Toronto  
19 Russell Street  
Toronto, Ontario  
Canada M5S 1A1**

### ASSISTANT PROFESSOR—IMMUNOLOGY.

Tenure-track position, research, and teaching available September 1986. The successful candidate will be expected to establish a vigorous research program and direct graduate students. Candidate can be working in plant, animal, or microbial immunology. Teaching will involve a core course in science and in the area of specialty. Send curriculum vitae, statement of research interests, and names of three references to: **Dr. Thomas E. Jensen, Chairman, Department of Biological Sciences, Lehman College, City University of New York, Bronx, NY 10468.** Application deadline: 24 January 1986.

*Lehman College is an Affirmative Action/Equal Opportunity Employer. Applications from minority persons and women are especially welcomed.*

### BIOCHEMIST

Biology Department invites applications for a tenure-track appointment at the assistant scientist level in the area of biochemistry for an initial appointment of 2 years. Strong background in analytical biochemistry and some biology with a demonstrated commitment to research on marine organisms required, with the goal of collaboration with other department members. Applicants with research experience in the biochemistry of metabolism, development, growth, or reproduction of marine animals or plants are particularly encouraged, since salary and set-up money can be guaranteed only for research in these areas.

Application deadline is 7 February 1986.

Apply to: **Personnel Manager, Box 54P, WOODS HOLE OCEANOGRAPHIC INSTITUTION, Woods Hole, MA 02543.** *An Equal Opportunity Employer, M/F/H.*

**COMMUNICATIONS POLICY:** The School of Social Sciences announces the creation of a **CHAIR** in communications policy, to be effective September 1986. The position will be filled at the full professor level, with Ph.D. and teaching experience required. Candidates must have an active and ongoing research program, including publications in communications policy. Responsibilities of the professorship will include analyzing issues in information and communications technologies; serving as a resource person to and liaison with students, academia, and business on issues in information and communications policy; and teaching in the academic programs of Georgia Tech, especially those that relate to the economic, political, social, cultural, and other effects that information and communications technologies have on national and international affairs.

This position is funded for the first 5 years by the Southern Bell Company and carried with it secretarial, graduate student, and other support. Salary is negotiable. *Georgia Tech is an Equal Opportunity/Affirmative Action Employer.*

Please send curriculum vitae (or nominations) to: **Professor Ronald Bayor, Chairperson, Recruitment Committee, School of Social Sciences, Georgia Tech, Atlanta, GA 30332,** by 1 March 1986.

## POSITIONS OPEN

### TRANSPORT PHYSIOLOGIST DEPARTMENT OF PHYSIOLOGY UNIVERSITY OF KANSAS MEDICAL CENTER

A tenured appointment as **ASSOCIATE PROFESSOR OR PROFESSOR OF PHYSIOLOGY** with research interests in **epithelial transport** and ability to teach medical and graduate students in **gastrointestinal physiology** is available 1 July 1986. Preference will be given to candidates who can relate their research interests to aging phenomena. The successful candidate will have a well-established research program and sustained grant support at the national level. The appointee will have an M.D., Ph.D., or equivalent degree. The salary is open, depending on present rank and experience. Curriculum vitae and the names of three references should be sent to: **Dr. Gilbert S. Greenwald, Department of Physiology, University of Kansas Medical Center, 39th and Rainbow Boulevard, Kansas City, MO 66103.**

Evaluation of candidates will begin 1 February 1986. *An Equal Opportunity/Affirmative Action Employer.*

**BIOCHEMIST:** The Department of Chemistry at Brooklyn College of the City University of New York invites applications for an anticipated tenure-track position as assistant professor of biochemistry beginning September 1986. Candidates must have a strong background in chemistry, the ability and motivation to develop a vigorous and productive research program, and a commitment to excellence in teaching at the graduate and undergraduate levels. Although all areas of biochemistry will be considered, neurochemistry, enzymology, and synthesis of biochemical macromolecules are of special interest. Send curriculum vitae, a statement of future research plans, and three letters of recommendation to: **Professor Leon Gortler, Department of Chemistry, Brooklyn College, Brooklyn, NY 11210.** *An Equal Opportunity/Affirmative Action Employer.* Application deadline: 1 March 1986.

**CHAIR, MICROBIOLOGY.** Louisiana State University invites applications and nominations for the position of chairman of the Department of Microbiology. Candidates must hold a doctorate in microbiology or a related discipline, have demonstrated a distinguished record of scholarship and professional achievement as evidenced by publications and grant awards, and have leadership and administrative ability consistent with building a nationally recognized department. Salary will be commensurate with qualifications. The appointment is available as of August 1986. Candidates should submit curriculum vitae, names of references, and statement of research interests before 28 March 1986 to: **John M. Larkin, Chairman Search Committee, Department of Microbiology, Louisiana State University, Baton Rouge, LA 70803.** *LSU is an Equal Opportunity/Affirmative Action Employer.*

### THE WEIZMANN INSTITUTE OF SCIENCE is pleased to announce the availability of the Charles H. Revson Career Development CHAIRS.

The Revson chairs are intended for promising scientists who are eligible for appointment as senior scientists (assistant professor) at the Weizmann Institute.

The Revson chairs are intended for either scientists who reside in Israel or for those who are considering making their residence in that country. The limited number of chairs will be awarded on a competitive basis.

The appointments for Revson Career Development chairs are for 3 years. Appointees found suitable will be invited, at the end of their temporary appointment, to continue their employment as permanent members of the Weizmann Institute's scientific staff.

Application forms and further information are available from:

**The Charles H. Revson Foundation Program  
c/o The Academic Secretary  
Weizmann Institute of Science  
Rehovot, Israel 76100**

## POSITIONS OPEN

### BIOLOGY FACULTY ELECTRON MICROSCOPIST

The Department of Biological Sciences at the State University of New York at Albany has a tenure-track, research faculty position to fill by or before September 1986. The successful applicant will be responsible for supervising the Department's EM facility. We are seeking someone who uses electron microscopy to study cellular or neural biology, especially someone who uses molecular probes (such as immunocytochemistry or receptor binding) at the EM level. This position will complement two other tenure-track positions (see *Science*, 8 and 22 November 1985). The candidate must have postdoctoral experience and must be able to establish an extramurally supported research program. Salary range, \$28,000 to \$33,000 for 12 months.

Applicants should send curriculum vitae, brief letter describing their research interests, and the names, addresses, and telephone numbers of three referees by 1 February 1986 to: **Dr. Helen Ghiradella, Department of Biological Sciences, State University of New York at Albany (SUNYA), 1400 Washington Avenue, Albany, NY 12222.**

*SUNYA is an Affirmative Action/Equal Opportunity Employer. Applications from minority persons, women, handicapped persons, and Vietnam-era veterans are especially welcome.*

### CELL BIOLOGY

**University of California at San Francisco.** Applications are invited for a tenure-track position at the assistant professor level as part of an interdisciplinary cell biology program with primary appointment in pharmacology. Candidates are expected to develop a strong, independent research program focusing on molecular aspects of cell biology.

The appointment can begin on or after 1 July 1986. Complete applications must be received by 1 March 1986. Applicants should send their curriculum vitae, including a brief summary of research interests, and the names and addresses of at least three references to: **Dr. Peter Walter, Department of Biochemistry and Biophysics, S964, University of California, San Francisco (UCSF) CA 94143-0448.**

*UCSF is an Equal Opportunity Employer; women and minorities are encouraged to apply.*

### BIostatistician/ DEPARTMENT CHAIRPERSON

The Department of Biostatistics of the Graduate School of Public Health, University of Pittsburgh, has an opening effective 1 April 1986 for tenure-stream (or immediate tenure, depending on qualifications) for a professor of biostatistics and department chairperson. Duties include serving as chief administrative and academic head of a major department at the graduate level (both master's and doctoral students) which embraces both biostatistics and human genetics and ramifications thereof; teaching; independent research, as well as coordination of the department's varied research in biometry, public health statistics, clinical trials, and human genetics; membership/service in learned societies. Requirements include an earned doctorate (Ph.D., Sc.D., Sc.D.Hyg., Dr.P.H., or M.D.); proven track record of scholarly attainment in the field of biostatistics; demonstrated administrative leadership in an academic setting, preferably at the university level; demonstrated teaching effectiveness, preferably at the university level. Send by 31 January 1986 letter of intent, current curriculum vitae, reprints of five most recent peer-reviewed articles, and list of personal references to: **Dr. Robert B. Yee, Chairman, Biostatistics Search Committee, 428 Parran Hall, Graduate School of Public Health, University of Pittsburgh, 130 DeSoto Street, Pittsburgh, PA 15261.** *The University of Pittsburgh is an Affirmative Action/Equal Opportunity Employer.*

**COLLECTION MANAGER, INVERTEBRATE PALEONTOLOGY.** Applications for 3-year grant appointment are sought from invertebrate paleontologists with degree in paleontology/geology (M.A./M.S. preferred) and 2 years curatorial experience. Familiarity with invertebrate fossils of western North America desired. Beginning salary: \$22,500. Send résumé and names of three references by 1 February to: **Dr. E. C. Wilson, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007.** Telephone: 213-744-6393. *An Equal Opportunity Employer.*

## POSITIONS OPEN

**CENTENNIAL PROFESSOR.** Vanderbilt University invites applications from eminent chemists in any area of physical chemistry, though those areas that interact with other departments, such as biophysical chemistry or materials science, are favored. The appointment may begin as early as September 1986. Candidates must be recognized as leaders in their research area. The successful candidate will be expected to be committed to teaching and the continuation of an established, active research program. Send résumé to: **J. C. Martin, Department of Chemistry, Vanderbilt University, Nashville, TN 37235.** *Vanderbilt University is an Equal Employment Opportunity/Affirmative Action Employer.*

### UNIVERSITY OF NEBRASKA-LINCOLN CHAIR, DEPARTMENT OF CHEMISTRY

Nominations and applications are invited for the position of chair and professor with tenure. A fall 1986 starting date is preferred. Candidates should have a nationally respected chemistry research program with major external funding, proven teaching ability, and demonstrated leadership. Applications with curriculum vitae or nominations should be sent by 14 February to: **Professor Michael L. Gross, Chemistry, Chair Search Committee, Department of Chemistry, University of Nebraska-Lincoln, Lincoln, NB 68588-0304.**

*Affirmative Action/Equal Opportunity Employer*

### CHAIRMAN, DEPARTMENT OF ZOOLOGY.

Applications are invited from persons with an earned doctorate in Zoology or related field, teaching experience, and a record of quality research and publications. Administrative experience is desirable.

The departmental emphasis is on undergraduate and graduate teaching and research. The department is currently composed of 16 faculty members with 400 pre-baccalaureate and 30 postbaccalaureate majors. This position will be available 1 August 1986. Applicants should submit curriculum vitae and names of three references by 1 February 1986 to: **Dr. David McLaughlin, Search Committee, Department of Zoology, Howard University, 415 College Street, NW, Washington, DC, 20059.**

*Equal Opportunity Employer*

### TENURE-TRACK POSITION COMPARATIVE ANIMAL PHYSIOLOGIST SANTA CLARA UNIVERSITY

Applicants are sought for a tenure-track position as assistant professor of biology to start fall term 1986. Requirements are a completed Ph.D. in an appropriate field, teaching experience, and an active research program. Postdoctoral experience is strongly recommended. Applicants will be expected to involve undergraduate students in their research.

Santa Clara University, a Jesuit institution, is located 45 miles south of San Francisco. It is an undergraduate, liberal arts institution in which emphasis is placed both on teaching excellence and quality research. The appointee will teach comparative animal physiology (with laboratory), mammalian physiology, and a course in his/her area of expertise, as well as participate in the lower division core curriculum.

Applicants should submit their résumés, official transcripts, names, addresses and telephone numbers of three references, and a brief outline of their current research to: **Dr. William Eisinger, Department of Biology, Santa Clara University, Santa Clara, CA 95053,** by 3 February 1986. *Santa Clara University is an Equal Opportunity/Affirmative Action Employer, Title IX, M/F/H.*

### DIRECTOR, DEPARTMENT OF PATHOLOGY

The **JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE** and the **JOHNS HOPKINS HOSPITAL** are seeking a physician to lead our Department of Pathology as professor and director. Applicants should have demonstrated outstanding abilities in research and teaching, as well as the capability to direct the service missions of the department.

Please send letter of application, curriculum vitae, and bibliography to: **Dr. David A. Blake, Secretary, Pathology Search Committee, Johns Hopkins University School of Medicine, 720 Rutland Avenue, Baltimore, Maryland 21205.**

*An Affirmative Action/Equal Opportunity Employer.*

Deadline date for submission: 1 February 1986.



## POSITIONS OPEN

### DEAN FACULTY OF ARTS AND SCIENCES

Nominations and applications are invited for the position of dean of the Faculty of Arts and Sciences. The University of Pittsburgh is a comprehensive graduate and research university. The arts, humanities, natural sciences, and social sciences together form the intellectual and artistic core of the university. The Faculty of Arts and Sciences consists of 30 academic departments, with 580 full-time faculty serving 1300 graduate students and 8000 undergraduate students.

**Qualifications:** The dean should be an outstanding and respected scholar in one of the disciplines of the arts and sciences. It is also desirable that the successful candidate have had some experience in academic administration.

**Application deadline:** 15 February 1986.

Letters of application (including curriculum vitae and statement of interest) and the names of five references should be forwarded to: **Professor James V. Maher, Chair, FAS Dean Search Committee, 801 Cathedral of Learning, University of Pittsburgh, Pittsburgh, PA 15260.**

The Department of Biological Sciences at the University of Maryland Baltimore County (UMBC) has a tenure-track position for an outstanding **DEVELOPMENTAL BIOLOGIST** (plant or animal) at a rank commensurate with experience. The department has 25 faculty members and 75 graduate students whose research interests range from molecular to population biology. Applicants should submit curriculum vitae and a statement of research interests and teaching experience by 15 March 1986 to: **Dr. Keith R. Porter, Chairman, Department of Biological Sciences, University of Maryland Baltimore County, Baltimore, Maryland 21228.** *UMBC is an Equal Opportunity/Affirmative Action Employer.*

### DEVELOPMENTAL PLANT MORPHOLOGIST

The Department of Biology at the University of California, Los Angeles, invites applications for a tenure-track position in developmental plant morphology. The appointment may be made at any rank. Responsibilities include the teaching of an undergraduate course in plant morphology and a specialty course. We are looking for candidates with a record of creative and innovative research with strong interests in, and imaginative approaches to, problems of plant development and differentiation.

Please send curriculum vitae, statement of research goals, and the names of three references to:

**Plant Biology Search Committee  
Department of Biology  
University of California, Los Angeles  
Los Angeles, CA 90024**

Closing date for applications is 15 February 1986.

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

### EPIDEMIOLOGIST (RADIATION) CENTERS FOR DISEASE CONTROL (CDC), ATLANTA, GEORGIA

The Division of Chronic Disease Control, Center for Environmental Health, CDC, invites applicants for a staff position in radiation epidemiology. This position will involve assessment of internal and external exposure to radionuclides, the conduct of epidemiologic studies of persons exposed to nonionizing and ionizing radiation, risk assessment of radiation exposures, radiation accident response management, and participation in radiation related cancer and other chronic disease control activities. Applicants should have a Ph.D., M.D., or be a certified health physicist and have significant training and experience in radiation biology, health physics, radiation epidemiology, nuclear medicine, or a closely related field. Position is in the Career Civil Service or the Public Health Service Commissioned Corps. Salary Range: \$37,000 to \$45,000, depending on qualifications, experience, and personnel system. For program information, contact: **Jim Ruttenber, M.D., Matthew Zack, M.D., or Christie Ehemann, M.S., Cancer Branch, Division of Chronic Disease Control, Center for Environmental Health; telephone: 404-452-4068.** Send résumés and letters of reference to: **Ms. Jenny Garner, Personnel Management Specialist, Personnel Management Office, Centers for Disease Control, Atlanta, GA 30333; telephone: 404-329-3613.** Closing date: 31 January 1986. *An Equal Opportunity Employer.*

## POSITIONS OPEN

### DIRECTOR, BACTERIOLOGY PROGRAM

Applications are sought from an established company for a senior research and development scientist to lead a group of Ph.D.'s working on rapid and automated tests for the clinical microbiology laboratory. A minimum of 6 year of postdoctoral experience is required. Experience in commercial microbiology test development or a record of achievement in academic research is preferred. Send résumé and list of references to: **Box 273, SCIENCE.**

### DIRECTOR DIVISION OF MARINE SCIENCES Harbor Branch Foundation, Inc.

Applications are invited for the position of **MARINE SCIENCE DIRECTOR** at Harbor Branch Foundation, an institution established primarily for research in the marine sciences and for the development of tools for underwater oceanographic research. The Division of Marine Science consists of 36 marine scientists, research assistants, and postdoctoral fellows, plus support staff. The successful candidate will oversee the development and coordination of on-going interdisciplinary programs in lagoonal, shelf, and open ocean research, some of which involve shipboard and submersible operations on vessels and submersibles owned and operated by Harbor Branch Foundation.

Candidates must have an earned doctorate in a marine-related science, a distinguished research record, demonstrated administrative and leadership skills, and proven ability to attract outside funding. The director will be expected to maintain a vigorous research program in his/her area of specialty. Interested applicants should forward an application, including résumé, supporting materials, and names of three references by 1 March to:

**Dr. Keven J. Eckelbarger  
Search Committee Chairman  
Harbor Branch Foundation, Inc.  
RR 1, Box 196  
Fort Pierce, Florida 33450**

*Harbor Branch Foundation is an Equal Opportunity Employer*

### ELECTRON MICROSCOPY LABORATORY COORDINATOR

Coordinate and maintain a multiuser EM facility serving the biological and physical sciences. Applicant must be experienced in microscope maintenance, training users, specimen preparation, and x-ray microanalysis and/or cryospecimen preparation. The facility has two TEMS (Philips 400 with STEM and 200), Philips 505 SEM, with ED-x-ray spectrometer, a Balzers Freeze-Fracture device, and ancillary equipment.

M.S. or B.S. required with at least 4 years of experience in electron microscopy. Salary dependent on training and experience. Send résumé to:

**Dr. Jerome J. Paulin  
Center for Advanced Ultrastructural Research  
152 Barrow Hall  
University of Georgia  
Athens, Georgia 30602**

*An Equal Opportunity/Affirmative Action Institution*

### EVOLUTIONARY BIOLOGIST

The Zoology Department, University of New Hampshire, seeks an individual whose training and research focuses on the testing of evolutionary hypotheses using aquatic systems. This is a tenure-track position at the assistant professor level, to begin 1 September 1986. The primary responsibility will be teaching an introductory zoology course for majors. In addition, participation in a senior level course in evolutionary biology is desirable. We seek a zoologist with broad, comparative interests complementary to departmental concentrations in environmental and regulatory biology with an emphasis on aquatic systems. The successful candidate will have a doctorate and will establish an active research program and participate in graduate education. Applicants should submit curriculum vitae, a concise statement of teaching and research interests, representative publications, and three letters of recommendation by 15 February 1986 to:

**Dr. Larry G. Harris  
Chair, Search Committee  
Department of Zoology  
University of New Hampshire  
Durham, NH 03824**

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

## POSITIONS OPEN

### EUKARYOTIC MOLECULAR GENETICIST

**School of Biological Sciences  
University of Nebraska-Lincoln**

Tenure-track assistant professor, August 1986. Completed Ph.D. and postdoctoral experience required. Maintain a productive research program and participate in undergraduate and graduate teaching, including graduate student advising. Submit letter outlining research and teaching interests, curriculum vitae, bibliography, and three letters of reference by 15 January (or until suitable candidates apply thereafter) to: **Mihir R. Banerjee, Chair, Genetics Search Committee, School of Biological Sciences, University of Nebraska-Lincoln, Lincoln, Nebraska 68588-0342.**

*Affirmative Action/Equal Opportunity Employer*

### EVOLUTIONARY BIOLOGY

Cornell University is seeking an evolutionary biologist for appointment in fall 1986, in the Section of Ecology and Systematics, Division of Biological Sciences. The position can be filled at any level, from assistant to full professor; but the successful applicant should have a well-established research program in organismic evolution, and professional experience beyond the Ph.D. This individual will play a central role in unifying the diverse interests in evolutionary biology already represented at Cornell, and therefore should possess leadership capabilities and familiarity with theoretical and empirical approaches to the study of evolution. Teaching responsibilities will include a one-semester undergraduate organic evolution course, offered every year, and additional obligations to be negotiated.

Interested applicants should send their curriculum vitae, copies of representative publications, a letter outlining research interests and future plans, and a brief description of teaching interests. They should also indicate the names of three individuals who can comment on their professional qualifications, and should arrange to have letters of reference from these individuals sent directly to: **Dr. Simon A. Levin, Chair, Evolutionary Biology Search Committee, Section of Ecology and Systematics, Corson Hall, Cornell University, Ithaca, NY 14853.**

Applications will be accepted until suitable candidates are found, but we expect to begin selecting finalists 15 January 1986.

*Cornell University is an Equal Opportunity/Affirmative Action Employer. Minority and women candidates are encouraged to apply.*

The Department of Radiation Oncology, University of Southern California (USC) is seeking applicants for:

**TENURE-TRACK FACULTY** appointment at the assistant professor level in the area of cellular radiation biology. Experience in working with mammalian cells is required, preference may be given to applicants with working knowledge of molecular aspects of cellular biology, radiation induced changes in tissues, and hyperthermia.

**RESEARCH ASSOCIATE or POSTDOCTORATE** position requiring experience in molecular and cellular biology.

Positions available 1 February 1986. Send curriculum vitae, list of publications, and names of three references to:

**COLIN K. HILL, Ph.D.  
Head, Division of Experimental Radiotherapy  
USC School of Medicine  
CANCER RESEARCH LABORATORY  
1414 South Hope Street  
Los Angeles, CA 90015**

Full-time, 1-year temporary **FACULTY POSITION** in biology available beginning September 1986. General biologist to teach anatomy and physiology in hospital nursing program, as well as other courses in Biology Department programs. College teaching experience is required. Ph.D. preferred. Entry at the instructor or assistant professor rank; salary is negotiable. Send résumé, three letters of reference, and official transcripts to: **Professor Albert F. Ansini, Chairperson of Search Committee, Biology Department, Kutztown University of Pennsylvania, Kutztown, PA 19530.** *Kutztown University is an Affirmative Action/Equal Opportunity Employer and actively solicits applications from qualified minority applicants.* Last date for receiving complete applications is 15 March 1986.

## POSITIONS OPEN

### DEPARTMENT OF GEOLOGY AND GEOPHYSICS UNIVERSITY OF CALIFORNIA, BERKELEY 94720

Subject to final budgetary approval, the department is authorized to make a **FACULTY TENURE-TRACK APPOINTMENT**, with effective date of July 1986, at the junior or senior level. Interested and qualified candidates who are engaged in innovative research in one of the following fields are encouraged to apply: sedimentology and diagenesis, including basin analysis; aqueous and low temperature geochemistry; isotope geochemistry. Applications, including the names of at least three references, should be sent to: **The Chairman of the Department** by 15 February 1986.

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

#### FACULTY POSITION

The Thrombosis Research Center of Temple University School of Medicine invites applications for a tenure-track position at the assistant or associate professor level, available on or after January 1986. Candidate must have a Ph.D. or an M.D. with experience in molecular biology and will be expected to maintain an independent externally-funded research program in the area of thrombosis and/or hemostasis. Areas of interest would normally include any of the following: blood coagulation, platelets, vascular wall cells, megakaryocytes, and leukocytes. Ability to cooperate or collaborate with other research scientists is essential. Teaching experience is not required but opportunities are available, if desired. Send complete curriculum vitae and names of three professional references and description of proposed research to: **Dr. Robert W. Colman, Director, Thrombosis Research Center, TEMPLE UNIVERSITY SCHOOL OF MEDICINE, Philadelphia, PA 19140. Equal Opportunity Employer.**

**FACULTY POSITIONS:** The Department of Anatomy at the University of Mississippi Medical Center invites applications for two tenure-track faculty positions, one at the junior level (instructor/assistant professor) and one at the senior level (associate professor). Although research areas are open, individuals with expertise in cell biology, immunocytochemistry, histochemistry, or cerebellar neurophysiology are encouraged to apply. Teaching responsibilities will be in gross anatomy or histology. The successful candidates should have (i) teaching experience, (ii) publications, and (iii) a significant potential for (junior level) or a proven record of (senior level) extramural funding. The department is well equipped and there is excellent administrative support for basic sciences. Submit curriculum vitae, a letter of introduction, and have three letters of reference sent to: **Dr. D. E. Haines, Professor and Chairman, Department of Anatomy, The University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216-4505. Equal Opportunity Employer, M/F/H/V.**

Applications or nominations are invited for a **FACULTY POSITION** in the Department of Biochemistry at the level of assistant professor. Applicants should have demonstrated ability to perform important original research and show promise of excellence in teaching. Candidates should submit curriculum vitae, including a list of publications, and a description of research interests to: **Dale Kaiser, Department of Biochemistry, Stanford University School of Medicine, Stanford, CA 94305.** They should also provide the names of three individuals who can serve as references.

*Stanford University is committed to increasing representation of women and minority members among its faculty and particularly encourages applications from such candidates.*

Applications are solicited for anticipated tenure-track **FACULTY POSITION** in the following area:

**Ph.D. MICROBIOLOGIST/IMMUNOLOGIST:** Candidate must have postdoctoral experience, strong publication record, and a commitment to teaching. In addition, extramural support that establishes a research program of excellence in molecular immunology is required.

Correspondence should be directed to:

**Dr. John Ruffin, Chairman  
Department of Biology  
North Carolina Central University  
Durham, NC 27707**

## POSITIONS OPEN

**FACULTY POSITIONS, DEPARTMENT OF MICROBIOLOGY, UNIVERSITY OF MARYLAND.** Available fall 1986. Seeking two individuals at the assistant or associate professor rank to complement the developing biotechnology program of the university. **MOLECULAR GENETICIST**—Background in microbiology with expertise in gene expression. **IMMUNOLOGIST**—To develop a research program in immunohistochemistry or cellular immunology. Candidates should send curriculum vitae, summary of research goals, and names of three references to: **Dr. Bob S. Roberson, Search Committee Chairperson, Department of Microbiology, University of Maryland, College Park, Maryland 20742, by 31 March 1986. An Affirmative Action/Equal Opportunity Employer.**

#### FACULTY POSITION IN PATHOLOGY

The Department of Pathology, University of Pittsburgh School of Medicine, invites applications for a faculty position at the rank of assistant professor in the Division of Clinical Chemistry. Candidates must have an M.D. degree and be eligible for Board-certification. A commitment to research and medical school teaching is essential. Please send curriculum vitae and names and addresses of three references to: **Thomas J. Gill III, M.D., Chairman, Department of Pathology, University of Pittsburgh School of Medicine, 716 Scaife Hall, Pittsburgh, PA 15261.**

#### FACULTY POSITIONS IN PHARMACOLOGY

The Department of Pharmacology, University of Missouri-Columbia, invites applications for two tenure-track positions at the rank of assistant or associate professor. Successful candidates must have a Ph.D. and/or M.D. degree with two or more years of postdoctoral research experience, preferably in a department of pharmacology. Candidates for the associate professor position must have a distinguished academic record and extramural research funding. While all areas relevant to pharmacology will be considered, preference will be given to candidates with background in modern molecular biology or cellular pharmacology related to membrane functions. Candidates will be evaluated on the basis of research and teaching potential. Successful candidates will be expected to develop a strong research program and participate in the teaching of medical and graduate students. Salary will be commensurate with experience. Please send a brief description of research plans, curriculum vitae, and the names of three references by 15 February 1986 to: **Dr. Hyun Dju Kim, Professor and Chairman, Department of Pharmacology, University of Missouri-Columbia School of Medicine, M517B Medical Sciences Building, Columbia, MO 65212. An Equal Opportunity/Affirmative Action Employer.**

**GENETICIST/MICROBIOLOGIST:** A tenure-track position at assistant professor level will begin in fall semester 1986. Primary duties involve teaching undergraduate courses in genetics and microbiology, as well as other electives, dependent on experience. A research program involving undergraduates is expected and will be supported. The Ph.D. is required and previous teaching experience is preferred. Please submit curriculum vitae and three letters of recommendation by 15 February 1986 to:

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

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

**HISTORIAN OF PHARMACY.** Tenure-track position, full-time (12 months annually), University of Wisconsin-Madison, available 1 July 1986. Assistant professor. Ph.D. required. The person selected will teach the history of pharmacy, pursue and maintain significant historical research in the history of pharmacy or related fields, and will become assistant director of the American Institute of the History of Pharmacy, based at the University of Wisconsin-Madison (School of Pharmacy). To apply, send curriculum vitae, including a complete list of publications (in print or accepted), two reprints or manuscripts which demonstrate historical scholarship, and the names and addresses of three professional references, before 15 February 1986 to: **Professor John Scarborough (Chair, Search Committee), School of Pharmacy, University of Wisconsin, Madison, WI 53706. The University of Wisconsin is an Affirmative Action/Equal Opportunity Employer.**

## RESEARCH SCIENTIST /IMMUNOLOGY

**Molecular Genetics, Inc.**, a leading biotechnology firm, is currently seeking **Research Scientists** to join our immunology and clinical research group. Successful candidates will interact in research projects employing a multidisciplinary approach to solving the health problems of food producing animals.

**Research Scientist:** originates and conducts research projects aimed at the induction of mucosal and systemic immunity to bacterial, viral, and parasitic antigens. An interest and demonstrated competence in the study of antigen structures involved in macrophage T cell-B cell interaction is required. Applicants must hold a Ph.D., plus 2 to 5 years of postdoctoral experience in immunology/immunohistochemistry or relevant discipline, and have an exhibited desire to apply basic immunology to the enhancement of disease resistance. Preference will be given to candidates with experience in mucosal immunity.

**Associate Scientist/Scientist:** conducts research projects aimed at producing therapeutically useful monoclonal antibodies to antigens from infectious agents, as well as host proteins. Applicants must hold a Ph.D. plus 0 to 3 years of relevant postdoctoral experience, or a M.S. with 3 to 5 years of relevant experience. Preference will be given to candidates with experience in producing and assaying for anti-idiotypic monoclonals.

Molecular Genetics offers competitive salaries, excellent benefits, and a stimulating multidisciplinary research environment.

Send curriculum vitae and list of three references to:

**MOLECULAR GENETICS, INC.  
10320 Bren Road East  
Minnetonka, MN 55343  
Attn: Mary S. Barton  
Manager, Human Resources**

*Equal Opportunity/Affirmative Action Employer*

## BIostatistician

Position available to develop and apply small sample methods for cancer diagnosis and therapy. These include a broad range of investigations such as: chemotherapy, monoclonal antibodies, radiotherapy, NMR imaging, and pharmacology. Record of independent research plus interest in clinical and statistical collaboration required. Send CV, references and statement of interest to:

**Dr. S. Litwin**



**FOX CHASE  
CANCER CENTER**

**7701 Burholme Avenue  
Philadelphia, PA 19111  
Equal Opportunity Employer**

## POSITIONS OPEN

### FACULTY POSITION RESPIRATORY THERAPY

The University of South Alabama is seeking a Ph.D. physiologist with an emphasis in the cardiovascular area to assist in the development of its cardiopulmonary/respiratory therapy baccalaureate degree program. The faculty member will be expected to teach and to develop and to maintain an active research program. Qualified persons need to send curriculum vitae and names of three references to: **Dr. Patsy C. Covey, Dean, College of Allied Health Professions, University of South Alabama, Mobile, Alabama 36688.**

*Equal Opportunity/Affirmative Action Employer.*

**HEAD, DEPARTMENT OF NEUROLOGY, BUFFALO GENERAL HOSPITAL, Buffalo, New York.** Voluntary, general hospital, 950 beds, nearing completion of construction/renovation program. Major affiliate of State University of New York/Bufalo, School of Medicine. Strong interest in program expansion. Eligibility for faculty appointment at associate professor or professor level and academic interest required. Research interests encouraged. Send curriculum vitae to: **Michael Cohen, M.D., Professor and Chairman, Department of Neurology, Children's Hospital, 219 Bryant Street, Buffalo, New York 14222.** *Equal Opportunity Employer.*

### LAVAL UNIVERSITY Department of Pharmacology HEAD OF THE DEPARTMENT

Applications are invited from pharmacologists with a marked interest for undergraduate and postgraduate teaching; with a good research experience in toxicology, applied pharmacology, molecular and cellular pharmacology, drug and alcohol abuses, and with administrative leadership. The position is funded for 3 years (renewable), starting in the spring of 1986. Applicants should have a Ph.D. or an equivalent diploma.

Salary is based on skill and experience; determined by salary scales of labor's contract, with administrative premium.

**Candidates must be able to communicate effectively in French.**

*All qualified individuals are encouraged to apply, but preference will be given to Canadian citizens and permanent residents.*

Applications, together with full curriculum vitae and two letters of recommendations, should be forwarded to: **Dr. Pierre Potvin, Dean, Faculty of Medicine, Université Laval, Québec, Canada G1K 7P4.**

Closing date for applications: 1 February 1986.

### HEAD, MICROBIOLOGY

Responsibilities include administration, teaching microbial genetics and a course in industrial microbiology/biotechnology, and direction of graduate students at the M.S. level. Requirements are a Ph.D. in microbial genetics/microbial technology, an established record of teaching, research, leadership, and a history of obtaining extramural funding. Résumé, description of research interests, and names of at least three references should be sent prior to 14 March 1986 to: **Dr. Joseph M. Sobek, Department of Microbiology, University of Southwestern Louisiana, Drawer 41007, USL Station, Lafayette, LA 70504.** *USL is an Equal Opportunity/Affirmative Action Employer.*

### INSTRUCTOR

Faculty position in the Department of Pathology, Division of Immunogenetics. A Ph.D. with 2 years postdoctoral is required. Individuals trained in immunogenetics with expertise in molecular immunology mechanisms should apply. Position will be available spring 1986. Submit letter outlining research and teaching interest, curriculum vitae, bibliography, and three reference letters to:

**Nicole Suciu-Foca, Ph.D.  
Professor of Pathology, Director Immunogenetics  
College of Physicians and Surgeons of  
Columbia University  
630 West 168 Street, P&S 14-403  
New York City, NY 10032**

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

Must submit by 1 April 1986.

## POSITIONS OPEN

### HEAD DEPARTMENT OF PHYSICS UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Department of Physics at the University of Illinois is seeking well-qualified applicants for the headship of the department. The department has a strong teaching and research program covering a broad range of experimental and theoretical physics. Applicants should have an international reputation in research and a strong interest in developing the research and teaching programs of the department. The head of the department is the chief administrative officer with responsibilities for administrative, budgetary and promotion decisions, and for leading the faculty in the development of research, teaching, and public service. The department head holds the rank of professor of physics with tenure and reports to the dean of the College of Engineering. The appointment will commence on 21 August 1986. Salary is negotiable. Qualified applicants should submit résumés to: **Professor H. K. Birnbaum, Materials Research Laboratory, University of Illinois, 104 South Goodwin Avenue, Urbana, IL 61801; telephone: 217-333-1901.** Résumés should be received by 15 February 1986 to receive full consideration, but the search will proceed until the position is filled. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

### DEPARTMENT HEAD COLORADO SCHOOL OF MINES

Colorado School of Mines is seeking nominations and applications for the position of head, Department of Environmental Sciences and Engineering Ecology, to begin fall semester 1986. Candidates should have a Ph.D. with a distinguished record of research, teaching, and other professional accomplishments. The successful individual must demonstrate evidence of leadership ability and a broad understanding of environmental activities associated with the energy, minerals, and chemical industries. Research experience related to either soil and reclamation sciences or industrial or hazardous waste management is preferred, but other research backgrounds will be considered.

Duties will involve teaching of the undergraduate and graduate levels, development of a graduate research program, and departmental administration.

Send letter of application and résumé by 1 February 1986 to: **Dr. Donald Gentry, Dean of Engineering and Undergraduate Studies, Colorado School of Mines, Golden, Colorado 80401.** *The Colorado School of Mines is an Equal Opportunity and Affirmative Action Employer.*

### HISTOLOGY

Assistant or associate professor of histology. Requirements: Ph.D. with preparation in histology and anatomy; commitment to teaching podiatric medical students and graduate students; minimum 5 years of full-time teaching experience; postdoctoral teaching/research experience. Applicants should be engaged in active ongoing research program. Responsibilities include lecture, laboratory, and student advising. Salary open. Send résumé, transcripts, and three letters of recommendation by 10 February 1986 to: **Sister John Karen Frei, O.P., Ph.D., Associate Vice President, Academic Health Science Center, Barry University, Miami Shores, Florida 33161.** *An Equal Opportunity Employer.*

**THE DEPARTMENT OF ANATOMY AND CELL BIOLOGY AT THE UNIVERSITY OF MICHIGAN** anticipates openings for three individuals for 3-year appointments. The positions will be at the **INSTRUCTOR OR ASSISTANT PROFESSOR LEVEL.** Candidates with postdoctoral and teaching experience will have priority. Teaching responsibility will be either gross anatomy or neuroanatomy. Successful applicants will be expected to carry on independent research, but will be encouraged to interact closely with existing strong research programs in cell biology, developmental biology, and neurobiology. Interested individuals should send curriculum vitae, names of three references, and a letter indicating current and future research interests, by 15 February 1986 to: **Dr. Allan R. Beaudoin, Associate Chairman, Department of Anatomy and Cell Biology, Medical Science II, The University of Michigan, Ann Arbor, MI 48109.** *The University of Michigan is a Nondiscriminatory/Affirmative Action Employer, code 35.*

## POSITIONS OPEN

### HISTOLOGY, ANATOMY, AND PATHOLOGY LABORATORY INSTRUCTORS

Two full-time laboratory instructors with responsibilities for laboratory instruction in at least two of the above areas. Requirements: master's/Ph.D. and demonstrated teaching ability. Send detailed curriculum vitae, transcripts, and three letters of recommendation by 10 February 1986 to: **Sister John Karen Frei, O.P., Ph.D., Associate Vice President, Academic Health Science Center, Barry University, Miami Shores, Florida 33161.** *An Equal Opportunity Employer.*

The University of Michigan, School of Natural Resources, is seeking to fill a full-time, 9-month, tenure-track position in **LANDSCAPE ARCHITECTURE.** Rank and salary will be commensurate with qualifications and experience. The primary focus is directed toward a graduate specialization in landscape architecture offering both the M.L.A. and Ph.D. degrees. The specialization is an integral part of a research-oriented, interdisciplinary professional school focusing on renewable natural resources and the environment. It is expected that the position will be filled no later than 1 September 1986. Applicants must have a graduate degree and a professional degree in landscape architecture, as well as training and experience in physical design. While a Ph.D. is desirable but not essential, an active research program along with related publications is required. Candidates are particularly sought with expertise in one of the following areas: cultural landscape and landscape architecture history; landscape plants, their communities and planting design; or behavioral approaches to environmental design. Applicants with other areas of specialization will be considered. Excellence in both teaching and research is emphasized.

Applicants should submit curriculum vitae, college transcripts, and a list of publications with supportive information on their teaching and research and as relevant to their professional practice in relation to this position. Three letters of recommendation also should be submitted. All materials should be sent to: **Dr. James E. Crowfoot, Dean, School of Natural Resources, 3516 Dana Building, The University of Michigan, Ann Arbor, MI 48109-1115.** Closing date for applications and supporting materials is 1 February 1986.

*A Nondiscriminatory/Affirmative Action Employer*

### MAMMAL COLLECTION MANAGER

The Museum of Southwestern Biology, University of New Mexico, invites applications for permanent position as collection manager in the Division of Mammals. Minimal qualifications: M.S. in museum science or related field and 2 years of experience in a mammalian research collection. Knowledge of micro and mainframe computers desirable. Duties include overseeing collection computer files, supervising curatorial staff, and participating in all aspects of managing one of the nation's largest and most rapidly growing research collections of recent mammals. \$18,000 to \$21,000, depending on qualifications and experience. Apply by 1 February 1986, position starting 1 April 1986. Submit curriculum vitae, list of pertinent courses, and have three letters of reference sent directly to:

**Dr. Terry L. Yates  
Department of Biology  
University of New Mexico  
Albuquerque, New Mexico 87131**

*Affirmative Action/Equal Opportunity Employer*

### NEUROSCIENTIST

Applications are being invited from individuals with a background in neurochemistry or neuroanatomy to engage in research in the areas of respiratory or cardiovascular regulation. Applicants may have either a M.D. or Ph.D. degree. This is a tenure-track position; faculty level and salary to be commensurate with experience. The successful candidate would be expected to participate in graduate teaching and would be encouraged to develop an independent research program. Applicants should submit curriculum vitae, a summary of previous and proposed research, references, and copies of any significant publications to: **Neil S. Cherniack, M.D., Associate Dean for Academic Program Development, Office of the Dean-School of Medicine, Case Western Reserve University, 2119 Abington Road, Cleveland, Ohio 44106.** *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### INVERTEBRATE ZOOLOGIST

The Biology Department of the University of North Carolina (UNC) at Asheville is seeking an invertebrate zoologist for an anticipated tenure-track position at the assistant professor rank. Responsibilities are to teach an invertebrate zoology course to upper level majors, to develop a course in the faculty member's specialty, and to teach in the department's introductory biology courses. Candidates must have a Ph.D. and a commitment to undergraduate teaching. It is expected that a research program appropriate to an undergraduate institution will be developed. Research opportunities in water and forest pest biology are available in the region. Send curriculum vitae to: **Dr. Alan E. Comer, Chairman, Department of Biology, UNC-Asheville, Asheville, NC 28804**, by 15 January 1986. *UNC-Asheville is an Equal Opportunity/Affirmative Action Employer.*

UNC-Asheville is a state supported undergraduate institution of approximately 2000 students located on 200 wooded acres in the Blue Ridge Mountains of western North Carolina.

### UNIVERSITY OF HONG KONG LECTURER IN ANATOMY

Applications are invited for a lectureship in the Department of Anatomy. Candidates should have a medical qualification and/or a postgraduate degree in science together with experience of teaching in one or more of the major anatomical specialties (gross anatomy, neuroanatomy, histology, and cell biology). The appointee will be expected to undertake research, preferably in one of the department's pre-existing areas of interest—neurobiology, neuroendocrinology, cell biology, reproductive biology, human growth, anthropology, and oral history.

Annual salary (superannuable) is on an 11-point scale: HK\$160,980 to HK\$269,100 (US\$1 = HK\$7.80 as of 22 November 1985). Starting salary will depend on qualifications and experience. At current rate, salaries tax will not exceed 17 percent of gross income. Housing benefits at a rental of 7½ percent of salary, children's education allowances, leave, and medical benefits are provided.

Further particulars and application form may be obtained from **The Secretary General, Association of Commonwealth University (Appointments), 36 Gordon Square, London, England WC1H 0PF**, or from the **Appointments Unit, Secretary's Office, University of Hong Kong, Hong Kong**. Closes: 8 February 1986.

A position is immediately available in the Howard Hughes Medical Institute and the Department of Molecular Physiology and Biophysics at the Vanderbilt University, School of Medicine. The person will be responsible for a **MOLECULAR BIOLOGY** core laboratory which will support the research of a number of investigators. This individual should have a Ph.D. or M.D. and several years of experience in molecular biology and a talent for organization and collaborative interactions. Special expertise in DNA synthesis and sequencing, genomic DNA library construction and screening, plasmid construction, and so forth.

Interested persons should send current curriculum vitae, including a list of three references to: **Howard Hughes Medical Institute, Ms. Julie Morris, Business Manager, 702 Light Hall, Vanderbilt University, Nashville, TN 37232**.

**MOLECULAR BIOLOGIST.** Tenure-track position at the assistant professor level available September 1986. Ph.D. required at the time of appointment. A strong background in molecular biology and microbiology, and experience with recombinant DNA techniques, DNA sequencing, cloning, and expression of genes are required. Preference will be given to applicants with broad training and teaching experience in biology at the college level and who demonstrate a strong commitment to teaching at the undergraduate level. Duties include: teaching courses in cellular and molecular biology, microbiology, and general biology; assisting in the development of courses for the molecular biology option of the biology major; student advising, faculty committee participation, and supervision of graduate students at the master's level. Submit curriculum vitae, transcripts, and three letters of reference by 30 January 1986 to: **Dr. Juanita Barrera, Chair, Department of Biological Sciences, California State University, Sacramento, CA 95819**. *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**QUALITY ASSURANCE MANAGER:** Hazleton Laboratories, a leading toxicology/chemistry contract laboratory currently has available a unique career opportunity for an individual with strong leadership ability and prior quality assurance experience. Requires toxicology study experience, an understanding of federal GLP requirements for preclinical studies, strong communication and management skills. Hazleton Laboratories is located in a community which offers an outstanding cultural and social environment. Please send résumé to: **Personnel Department, P.O. Box 7545, Madison, WI 53707**. *Equal Opportunity Employer.*

**MOLECULAR BIOLOGIST**—Applicants are invited for a tenure-track faculty position at the rank of assistant professor. Applicants should have postdoctoral experience and demonstrated excellence in conducting research in molecular biology, particularly of animal viruses. The appointee will be expected to develop an independent research program and to participate in teaching medical, dental, and graduate students. Send curriculum vitae, a statement of research interests, and the names of three references by 1 February 1986 to: **Dr. L. William Clem, Department of Microbiology, University of Mississippi Medical Center, Jackson, MS 39216-4505**. *Equal Opportunity Employer, M/F/H/V.*

### MOLECULAR/DEVELOPMENTAL BIOLOGY

The Department of Biology of the University of Houston—University Park invites applications for tenure-track positions at the **assistant/associate professor** level. Candidates must have at least 1 year of postdoctoral experience. Preference will be given to individuals using molecular or genetic approaches to some aspect of development. The successful applicants will become part of a growing group of molecular and cellular developmental biologists and will be expected to establish and maintain an independent research program and assist in the instruction of graduate and undergraduate students. Located in the nation's fourth largest city, the University of Houston is a state-supported institution with approximately 30,000 undergraduate and graduate students. Interested applicants should submit curriculum vitae, a summary of research interests, and the names of three references to: **Susan J. Henning, Ph.D., Developmental Biology Search Committee, Department of Biology, University of Houston—University Park, Houston, TX 77004**. *Equal Opportunity Employer.*

**MOLECULAR GENETICISTS.** The Department of Biological Science of Florida State University (FSU) is seeking two molecular geneticists for assistant professor-level, tenure-track positions commencing August 1986. Preference will be given to applicants using recombinant DNA technology to study problems complementing areas of current strength within the department including, but not limited to, plant molecular biology, regulation of gene expression, cellular and developmental biology, immunology, molecular parasitology, and microbiology. The successful applicants will be expected to develop vigorous research programs. Primary teaching duties will be in undergraduate genetics and graduate teaching in the candidate's area of interest. Send curriculum vitae, selected reprints, a brief statement of research interests, and three letters of recommendation by 1 February 1986 to: **Dr. J. Herbert Taylor, Chair, Search Committee, Department of Biological Science, Florida State University, Tallahassee, FL 32306**. *FSU is an Equal Opportunity/Affirmative Action Employer.*

### NEUROBIOLOGISTS

The Department of Neurobiology and Physiology at Northwestern University is seeking applications for two faculty positions in developmental or cellular/molecular neurobiology. Rank is open. One of the positions is for an investigator working with a sensory system.

The Department of Neurobiology and Physiology has strong, well-funded groups in sensory neurobiology and in neuroendocrinology, both representing multidisciplinary approaches to these areas of neuroscience. The department currently administers a Ph.D. program; two NIH training programs are centered in the department. There is an undergraduate major leading to a B.A. and a B.A./M.S. honors program for exceptional undergraduates.

Interested persons should submit curriculum vitae and the names of three persons who can provide references to: **Dr. Albert I. Farbman, Department of Neurobiology and Physiology, Northwestern University, Hogan Hall, Evanston, IL 60201**.

## ASSOCIATE DIRECTOR

The University of Illinois at Chicago and the Illinois Department of Mental Health and Developmental Disabilities invite applications and nominations for the position of associate director of their jointly operated institute, the Institute for the Study of Developmental Disabilities (ISDD). ISDD is engaged in and promotes: research into the biomedical and behavioral bases for developmental disabilities; evaluative research on public policies affecting developmental disabilities; development of educational programs and of model service programs. In addition to its permanent staff, faculty of numerous academic departments are associated with the institute including psychology, biological sciences, special education, neurology, and the School of Public Health.

The associate director is expected to assist the director in policy formulation, program development and advocacy, and serve in a leadership role. In addition to administrative functions, the successful candidate will pursue his/her own research interests in an area directly related to developmental disorders. This position is with appropriate academic rank in the University of Illinois and civil service standing in the Department of Mental Health and Developmental Disabilities.

Applicants must have an earned doctorate (Ph.D. or M.D.) and a substantial record of research and scholarly achievement in a discipline relevant to developmental disabilities. Administrative experience and leadership ability are desirable qualities. Preferred starting date is September 1986. Deadline for receipt of applications and nominations is 28 February 1986, or until the position is filled.

Nominations and applications, including curriculum vitae, research plans, and names and addresses of five references should be sent to:

**Kenneth R. Swiatek, Director  
Institute for the Study of  
Developmental Disabilities  
1640 West Roosevelt Road  
Chicago, Illinois 60608**

*The University of Illinois and the Illinois Department of Mental Health and Developmental Disabilities are Equal Opportunity/Affirmative Action Employers.*

## AUSTRALIA UNIVERSITY OF MELBOURNE CHAIR OF PATHOLOGY

Applications are invited for a chair of pathology in the Department of Pathology of this University.

**SALARY:** A\$54,948 per annum with an additional loading for medically qualified appointee of A\$6,210

(Subject to change following National Wage decision)

The University is seeking an appointee with an outstanding record in any field relevant to the broad discipline of pathology. Further information about the above position, including details of the structure and resources of the department, application procedure, superannuation, travel and removal expenses, housing assistance, and conditions of appointment is available from the registrar. All correspondence (marked confidential) should be addressed to: **The Registrar, University of Melbourne, Parkville, Victoria, 3052, Australia**.

Applications close on 29 March 1986.

The University reserves the right to fill the chair by invitation.

*Equal Opportunity in Employment is the policy of the University of Melbourne.*



## POSITIONS OPEN

### MANAGER PHARMACEUTICAL RESEARCH

International Minerals and Chemical Corporation, a Fortune 200 company, and a leader in the development of agricultural products and animal health pharmaceuticals has an immediate opening for a manager of pharmaceutical research at our Corporate Research and Development Center in Terre Haute, Indiana.

The successful applicant will have a Ph.D. in pharmaceutical chemistry with a demonstrated expertise in the design and evaluation of animal health pharmaceuticals. This individual has had significant experience in the management of a research group and a demonstrated record of achievement in product development.

Salary will be commensurate with experience and includes a complete fringe benefit package. Please submit résumé and transcript in confidence to:

M. G. Ray  
International Minerals and  
Chemical Corporation  
P. O. Box 207  
Terre Haute, Indiana 47808

*An Equal Opportunity/Affirmative Action Employer.*



### MICROBIOLOGIST

The Department of Biology, University of Puerto Rico, is seeking individuals with research experience in microbiology with expertise in (i) microbial genetics, (ii) microbial immunology, or (iii) microbial physiology. The tenure-track position is available 1 July 1986. Priority will be given to individuals at the assistant professor level. Preference will be given to those candidates with strong credentials for, and commitment to, developing an independent research program. An interest in, and aptitude for, teaching undergraduate and graduate students is equally important. Fluency in Spanish is desirable, but not required.

Interested individuals should send curriculum vitae, a letter stating past, present, and future research interests, and have three letters of recommendation transmitted to: **Dr. George V. Hillyer, Professor and Chairman, Department of Biology, University of Puerto Rico, Rio Piedras, Puerto Rico 00931.**

### MOLECULAR BIOLOGISTS

The Department of Biology, University of Puerto Rico, is seeking a molecular biologist with expertise in the genetics of eukaryotes. The tenure-track position is available 1 July 1986. Priority will be given to individuals at the assistant professor level. Preference will be given to those candidates with strong credentials for, and commitment to, developing an independent research program. An interest in, and aptitude for, teaching undergraduate and graduate students is equally important. Fluency in Spanish is desirable, but not required.

Interested individuals should send curriculum vitae, a letter stating past, present, and future research interests, and have three letters of recommendation transmitted to: **Dr. George V. Hillyer, Professor and Chairman, Department of Biology, University of Puerto Rico, Rio Piedras, Puerto Rico 00931.**

**MOLECULAR GENETICIST.** Applications are invited for a full-time, tenure-track position at the assistant/associate professor level commencing fall 1986. Candidates should have a Ph.D. degree and must be qualified to teach general genetics at the undergraduate level, as well as biochemical (molecular) genetics at the graduate level. Expertise in bacterial genetics is highly desirable. Additional responsibilities will include, among other duties, supervising undergraduate and graduate research projects. Send curriculum vitae, undergraduate and graduate transcripts, statement of research interests and teaching philosophy, and three letters of recommendation to: **Dr. Lynne C. Miller, Department of Biological and Allied Health Sciences, Bloomsburg University, Bloomsburg, PA 17815.** All materials must be postmarked by 28 February 1986. *Women and minorities are encouraged to apply. Bloomsburg University is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### MOLECULAR IMMUNOLOGIST

The Department of Animal Sciences of the University of Illinois at Urbana-Champaign invites applicants for a tenure-track position as an assistant, associate or professor of molecular immunology. This position is in the department with eligibility for appointment in the University Biotechnology Center. The successful candidate should have a Ph.D. and is expected to establish a research program in molecular immunology, such as lymphocyte regulation, lymphokine biology, or gene transfer systems. Scientists within the Department of Animal Sciences are conducting research at the molecular level in neuroimmunomodulation, immunogenetics, and immunoglobulin transport, as well as basic research in reproductive endocrinology, muscle biology, biochemistry, and nutrition. Both laboratory and domestic animals are available to investigate immunological systems that have the potential for enhancing animal productivity.

Position is available immediately and salary is negotiable. To insure full consideration, send résumé, transcripts, and three letters of reference by 1 March 1986 to:

**W. R. Gomes, Head  
Department of Animal Sciences  
University of Illinois at Urbana-Champaign  
1301 West Gregory Drive  
Urbana, Illinois 61801  
Telephone: 217-333-3462**

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

**NEMATOLOGIST.** Assistant or associate tenure-track position (12-month appointment). Qualifications include Ph.D. degree in plant pathology or related field with training in molecular biology. The person employed will be expected to develop an innovative research program on the molecular biology of plant-parasitic nematodes. Individuals with training and experience in molecular biology of plant-parasitic, free-living, or animal-parasitic nematodes are encouraged to apply. Applications will be received until 1 March 1986 or until a suitable candidate is identified. Forward complete résumé (transcripts, publication list, future research goals, names of three references) to: **Dr. W. L. Klarman, Head, Plant Pathology Department, North Carolina State University, Raleigh, NC 27695-7616.** *North Carolina State University is an Equal Opportunity/Affirmative Action Employer.*

**NEUROPHYSIOLOGIST.** Postdoctoral/research associate position available immediately for an individual skilled in mammalian electrophysiology. Expertise in intracellular recording techniques desired for NIH-funded studies of brainstem mechanisms in analgesia. Competitive salary and benefits, Harvard Medical School appointment. Send curriculum vitae and names of three references to: **Dr. Warren E. Foote, Department of Psychiatry, Box 70, Massachusetts General Hospital, Boston, MA 02114.** *Equal Opportunity Employer.*

**ONCOLOGIST/RESEARCHER.** Must have a significant clinical commitment to an oncology subspecialty. Research background, preferably in applications of monoclonal antibodies or other biological modifiers to clinical problems. Suited to collaboration with strong basic science group recently developed at the University of New Mexico Cancer Center. Rank depends on qualifications. Send curriculum vitae, representative reprints, statement of interests and research goals to: **Thomas Tomasi, M.D., Ph.D., Director, Cancer Center, Chairman, Department of Cell Biology, University of New Mexico, Albuquerque, NM 87131.**

**PLANT PATHOLOGIST.** Assistant professor, Department of Plant Pathology, University of California, Riverside. Full-time tenure-track position. Appointee to develop innovative program in epidemiological research on plant pathogens integrated with problem-solving research in support of the ornamental plant industry. Graduate/undergraduate teaching 15 to 20 percent time. Ph.D. required with background in ecology, computer science, epidemiology, statistics, or mathematics desirable. Curriculum vitae, complete transcripts and three confidential letters of recommendation should be sent to: **Dr. J. A. Menge, Search Committee Chairman, Department of Plant Pathology, University of California, Riverside, CA 92521.** Application deadline is 15 March 1986, or later if a suitable applicant has not been selected. *Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### NEUROETHOLOGY AND BEHAVIORAL GENETICS

The Department of Biology, University of Miami, is seeking to fill two tenure-track positions at the level of assistant or associate professor, to complement its growing program in behavior, ecology, and evolution.

Position (i): **NEUROETHOLOGIST** working at the cellular level.

Position (ii): **GENETICIST** working in areas of development or gene expression as they relate to behavior.

Applicants should submit a brief statement of research plans and interests, curriculum vitae, two reprints, and have three letters of reference sent to: **Dr. Peter Luykx, Chairman, Search Committee, Department of Biology, University of Miami, Coral Gables, FL 33124.** Deadline 14 February 1986.

*An Equal Opportunity/Affirmative Action Employer.*

### NEUROSCIENCE POSTDOCTORAL POSITION

Position available immediately in neuroscience research laboratory conducting multidisciplinary studies of the neuroanatomical basis of learning and memory in the rhesus monkey as a model for understanding normal, pathological, and age-related memory changes in humans. Responsibilities will include neuroanatomical and/or behavioral studies in monkeys. Relevant research experience preferred. Possibility of 3-year NIH training grant support. Contact **Dr. D. L. Rosene or Dr. M. B. Moss, Department of Anatomy, Boston University Medical Center, Boston, MA 02118.** *Equal Opportunity Employer, M/F.*

### ORGANISMAL BIOLOGISTS Seton Hall University

**TWO** tenure-track positions at the assistant professor level beginning September 1986. Post-doctoral experience is required. Successful candidates will be expected to conduct an active research program involving undergraduate and master's students. A **mammalian physiologist** is expected to teach introductory level courses (general biology and anatomy and physiology), as well as upper level physiology and pharmacology courses.

A **developmental biologist** is expected to teach introductory level courses (general biology or anatomy and physiology), as well as upper-level histology and embryology courses. Please send a letter of application, curriculum vitae, and letters from three references before 3 February 1986 to:

**Dr. Daniel Burke, Chairman  
Department of Biology  
Seton Hall University  
South Orange, NJ 07079**

*An Equal Opportunity/Affirmative Action Employer*

### PHARMACOLOGIST/TOXICOLOGIST

The University of Utah seeks candidates for a faculty position in the **Center For Human Toxicology**, Department of Biochemical Pharmacology and Toxicology with extensive knowledge of and experience with analytical procedures including HPLC, GC, GC/MS, and immunoassay. Candidates should have a Ph.D. or equivalent degree in pharmacology/toxicology or related science. The successful candidate will have demonstrated an ability to develop a basic research program in biochemical pharmacology/toxicology. Position will involve work with center staff on a variety of service projects including forensic toxicology and graduate level teaching. Send curriculum vitae and four references to: **Douglas E. Rollins, M.D., Ph.D., 38 Skaggs Hall, University of Utah, Salt Lake City, Utah 84112.** Closing date 28 February 1986 or until candidate is identified. *Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL CELL BIOLOGIST/BIOCHEMIST** to study thermodynamic and molecular processes in cellular aging. Experience with cell biology techniques is necessary and a background in molecular biology and thermodynamics is desired. Research will be performed at the Barros Research Institute. Send résumé to: **Professor Barnett Rosenberg, Department of Chemistry, Michigan State University (MSU), East Lansing, Michigan.** *MSU is an Affirmative Action/Equal Opportunity Institution.*



**DIRECTOR  
OFFICE OF HEALTH RESEARCH  
WASHINGTON, D.C.  
\$61,296 to \$70,500**

**U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)** is seeking highly qualified candidates for the position of director, Office of Health Research (OHR). OHR is responsible for the development and evaluation of toxicity test methods and for providing toxicity data to enable the agency to accurately identify hazards and determine human risk from environmental exposure. The director is responsible for an interdisciplinary staff in Washington and the Health Effects Research Laboratory (HERL) with divisions in Research Triangle Park, North Carolina, and Cincinnati, Ohio.

Applicants must have a bachelor's or higher degree in either the biological sciences, general health sciences, or physical sciences, plus substantial professional experience demonstrating scientific competence and senior executive management skills.

**Mandatory Technical Qualifications:**

1. Experience in health research program management to include issue identification, research needs identification, program goal setting, budget preparation.
2. Demonstrated leadership in the biological sciences, toxicology, epidemiology, or experimental medicine as exemplified by scientific publications, leadership roles in professional societies, organization of scientific seminars, and/or editorial responsibility for scientific publications.
3. Demonstrated experience as a planner or manager of complex multidisciplinary health research and development or technical programs and laboratories, preferably in the environmental health field.
4. Demonstrated ability to communicate technical and nontechnical information clearly and concisely, both orally and in writing, to technical and nontechnical persons and groups.

Submit completed SF-171 (Application for Federal Employment) to: **Edna Morse, PM-224, Environmental Protection Agency, 401 M Street, SW, Washington, DC, 20460; telephone: 202-382-3328.** Resumes without accompanying SF-171's will not be considered.

Applications must be postmarked by 15 February 1986. EPA is an Equal Employment Opportunity Employer.

**AUSTRALIA  
THE UNIVERSITY OF  
MELBOURNE  
LECTURER/SENIOR  
LECTURER  
(CONTINUING)  
IN THE  
DEPARTMENT OF  
ZOOLOGY**

The Department of Zoology wishes to appoint an outstanding marine zoologist to a continuing lectureship/senior lectureship. The appointee will preferably have a major research interest in the ecology of inshore waters. Areas of teaching may include general ecology and invertebrate zoology at any undergraduate level. The position is available from 1 June 1986.

Salary in the range A\$26,236 to A\$34,467 per annum (lecturer) and A\$35,203 to A\$41,029 per annum (senior lecturer). (These rates are subject to review following the recent national wage case decision.) Applicants should indicate at which level they wish to be considered for appointment.

Further printed information regarding details of application procedure and conditions of appointment is available from the appointments officer (academic).

Applications, in duplicate, including names and addresses of at least three referees and quoting position number 654 0170 should be addressed to: **The Staff Officer, University of Melbourne, Parkville, Victoria 3052, Australia** and close on 7 February 1986.

*Equal Opportunity in Employment is the policy of the University of Melbourne.*

# Results Take Time. But The Rewards Last Forever.

It takes years to develop a new pharmaceutical product. But when you do, you've had an impact on the quality of life for generations to come. Syntex is today's premier pharmaceutical research company, with over four decades of industry leadership behind us. Make your career part of something great. Join Syntex in one of these immediate openings:

## Staff Researcher (Dept. PS) Pharmacology

You will assume leadership responsibilities in the development of new drugs for peptic ulcer disease and for the treatment of ulcerative colitis. The successful candidate must possess a PhD in Pharmacology, Biology or Physiology and 2-6 years' experience in gastrointestinal research; industry experience is preferred. Familiarity with screening procedures in advanced animal models of these diseases is required, as is a strong basic research background and publications list. Research experience in isolated tissue and cell work involving the GI tract is essential, as is excellent manual dexterity.

## IBS Postdoctoral Fellow (Dept. PS) Membrane Biology and Biochemistry

You will work on isolation and characterization of phospholipases A<sub>2</sub> and C from mammalian sources as well as isolation of endogenous inhibitors. The work also involves testing

potential inhibitors and determining their mode of action. The candidate must possess a PhD in Biochemistry with a strong background in enzyme kinetics, physical organic chemistry and mechanisms of enzyme reactions; postdoctoral experience of 6 months to 1 year helpful. You must possess considerable experience in enzyme/protein purification with a thorough knowledge of various chromatographic and electrophoretic procedures.

## IBS Postdoctoral Fellow (Dept. JB) Vascular Biology and Biochemistry

You will study the induction or release of monocyte procoagulant activity and agents which inhibit this activity, including compounds which elevate cyclic AMP levels in the cells. This program will also include the effect of diverse pharmacologic agents on activation of tissue plasminogen activator in blood and vascular tissue. The successful candidate will possess a PhD in Biochemistry, Immunology, or Biochemical Pharmacology, as well as experience in these fields, hematology and related areas. Experience in working with platelets, other blood cells and plasma proteins is especially desirable.

To apply, send resume and salary history, indicating appropriate Department code, to Syntex, Professional Employment, 3401 Hillview Avenue, Palo Alto, CA 94304. We are an equal opportunity employer.

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Science Means  
Excellence In Business*



## POSITIONS OPEN

### U.S. DEPARTMENT OF AGRICULTURE (USDA) COMPETITIVE RESEARCH GRANTS OFFICE (CRGO)

CRGO has two permanent positions available immediately for qualified scientists in **PLANT PHYSIOLOGY/PATHOLOGY, ENTOMOLOGY, OR FOREST BIOLOGY** to serve as associate program manager to the Biological Stress on Plant Program or the Forestry Program. The work involves management of research grants in these program areas. The positions are at the GS-13/14 level and located in Washington DC. For full details on qualifications and application procedures, contact: **Kathy Asmussen, telephone 202-475-4811**. Applications must be postmarked by 27 January 1986 for the biological stress position, and 3 February 1986 for the forestry position.

*USDA is an Equal Opportunity Employer.*

### CORNELL UNIVERSITY PLANT SYSTEMATIST

The L. H. Bailey Hortorium, a unit of the Division of Biological Sciences and the New York State College of Agriculture and Life Sciences, Cornell University, seeks applicants for a tenure-track position, available 1 July 1986, within the assistant professor range, in plant systematics-cytotaxonomy. Fifty percent of time will be devoted to developing and maintaining a vigorous, independent research program and fifty-percent of time to teaching introductory plant taxonomy and a course in plant cytogenetics. While we are particularly interested in applicants whose research involves cytotaxonomic and/or protein electrophoretic methods in addressing basic systematic questions, individuals with other research interests also are encouraged to apply. Applicants should send their curriculum vitae, a detailed statement of future research plans, and arrange to have three letters of recommendation sent to: **Dr. David A. Young, Search Committee Chairperson, L. H. Bailey Hortorium, 467 Mann Library, Cornell University, Ithaca, NY 14853**. Review of applications will begin on 1 February 1986. *Cornell University is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL BIOPHYSICS.** Physical studies of phase changes and lipid-protein rearrangements induced by calcium in model membranes. Projects involve (Cornell synchrotron) x-ray diffraction, EPR, and fluorescence. Physical background needed, biochemical background helpful. Start spring 1986. Salary negotiable. Send curriculum vitae and two or three letters of recommendation to: **Professor G. W. Feigenson, Section of Biochemistry, 254 Clark Hall, Cornell University, Ithaca, NY 14853**.

*An Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL FELLOW

Postdoctoral position available to study role of visceral afferent nerves in the primate. Single unit recording experience and knowledge of electronics necessary. Stipend commensurate with experience. Contact: **Dr. Joseph P. Gilmore, Department of Physiology, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105**. Applications must be received by 31 January 1986.

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

**POSTDOCTORAL OR GRADUATE RESEARCH ASSOCIATE** position available immediately to participate in research involving the biochemistry and immunology of human and feline retroviruses. Background in cellular immunology, biochemistry, tissue culture, and virology desired. Competitive salary, dependent upon experience. Send curriculum vitae and three references to: **Dr. Richard G. Olsen, The Ohio State University, Department of Veterinary Pathobiology, 1925 Coffey Road, Columbus Ohio 43210**.

*An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available immediately to study structure-function relationships of histocompatibility antigens of the mouse. Experience in protein biochemistry or molecular biology preferred. Send curriculum vitae, reprints, names, and telephone numbers of two references to: **Dr. Minnie McMillan, Norris Cancer Center NOR 609, University of Southern California School of Medicine, 1441 Eastlake Avenue, Los Angeles, CA 90033**.

## POSITIONS OPEN

**POSTDOCTORAL—NEUROHORMONE SECRETION.** Available immediately to study catecholamine secretory mechanisms in the adrenal chromaffin system. Experience/knowledge desirable in any of: cell calcium regulation, P. Inositol/Arach Acid metabolism, cell culture, membrane fusion, cellular secretion. Send curriculum vitae, bibliography, and names of three references to: **Dr. Allan Schneider, Department of Pharmacology, Albany Medical College, Albany NY 12208**.

### POSTDOCTORAL OPPORTUNITIES

Postdoctoral fellowships and research associateships are anticipated to be available in the Faculty of Medicine, University of Manitoba, over the next 6 months in various areas of medical research including: molecular biology, neurosciences, cardiac sciences, immunology, and human genetics. Both women and men are encouraged to apply. *In accordance with Canadian immigration requirements, priority will be given to qualified Canadian citizens and permanent residents of Canada.* Application with a curriculum vitae or inquiries should be forwarded to: **Dr. F. Stevens, Associate Dean (Research), University of Manitoba, A 108, 753 McDermot Avenue, Winnipeg, Manitoba, Canada R3E 0W3**.

**POSTDOCTORAL POSITIONS:** (i) to study the cellular and molecular biology of guanine nucleotide-binding proteins which regulate adenylate cyclase and other membrane enzymes, (ii) to study brain tyrosine protein kinases and their substrates. Candidates should have a strong background in protein chemistry, molecular biology, or cell biology. Positions are available in January 1986. Send curriculum vitae and names of three references to: **Dr. Eva J. Neer, Department of Medicine, Harvard Medical School, Brigham and Women's Hospital, 75 Francis Street, Boston, Massachusetts 02115**.

**TWO POSTDOCTORAL POSITIONS** available for investigations involving the lignin-degrading basidiomycete *Phanerochaete chrysosporium*. (i) **Molecular biologist** to study molecular genetics of the fungus and the lignin-degrading system. (ii) **Biochemist/bioorganic chemist** for structural, mechanistic, and physiological characterization of two lignin-degrading enzymes. Recent Ph.D.'s with related experience preferred. Salary \$15,000 to \$16,000 plus fringe benefits. Send résumé and names of three references to: **Professors Michael H. Gold and David G. Pribnow, Department of Chemical, Biological, and Environmental Sciences, Oregon Graduate Center, Beaverton, OR 97006-1999** (Portland metro area). *Equal Opportunity Employer.*

### POSTDOCTORAL POSITION

Laboratory of Dr. Hans Fromm to study the role of bile acids in the regulation of cholesterol and lipoprotein metabolism. The studies are conducted in close collaboration with members of the Department of Biochemistry. Laboratories are located in Basic Science Building on Department of Biochemistry floor. Research experience concerning lipoprotein chemistry and analytical techniques desirable. Applicants should send curriculum vitae and arrange for three letters of reference to be forwarded to:

**Dr. Hans Fromm, Professor of Internal Medicine  
George Washington University  
Director, Division of Gastroenterology  
2150 Pennsylvania Avenue NW—Suite 606  
Washington, DC 20037**

### CARTILAGE DEGRADATION AND AUTOIMMUNITY IN ARTHRITIS

**Joint Diseases Laboratory,  
Shriners Hospital for Crippled Children,  
McGill University,  
1529, Cedar Avenue,  
Montreal, Quebec, Canada H3G 1A6**

**THREE POSTDOCTORAL POSITIONS** are available in 1986 for up to 3 years for work on (i) molecular biology, (ii) biochemistry of tissue proteinases and their inhibitors with respect to cartilage destruction. In addition, there is a postdoctoral position to work on (iii) autoimmunity to cartilage proteoglycan in arthritis. Please send applications giving the names of three referees for (i) and (ii) to: **Dr. John S. Mort** and for (iii) to: **Dr. A. Robin Poole** at the above address.

## POSITIONS OPEN

**POSTDOCTORAL AT THE DALTON RESEARCH CENTER** for basic research on mechanisms of toxicity of oxygen radicals and redox-cycling compounds including adriamycin and paraquat is open now. Candidates should have experience/interest in oxygen radicals and training in biochemistry/microbiology/toxicology and U.S. citizenship or permanent visa. Address curriculum vitae and two letters of reference to: **Olen R. Brown, Ph.D., Dalton Research Center, University of Missouri, Columbia, MO 65211**.

**POSTDOCTORAL POSITION.** Available immediately to study central neuronal neuropeptide mechanisms which regulate gastrointestinal function using neurophysiological and neuropharmacological techniques. Experience in extracellular single unit recording and/or microiontophoresis and pressure ejection desired. Experience in computer data-processing helpful. Submit curriculum vitae and names of three references to: **Dr. William Barber, Department of Anatomy, College of Medicine, University of Arizona, Tucson, AZ 85724** by 30 March 1986. *Affirmative Action/Equal Opportunity Employer*

**POSTDOCTORAL POSITION** available for recent Ph.D. or M.D./Ph.D. to study catecholamine enzyme regulation. Federally funded training stipends available for U.S. citizens or foreign nationals who hold appropriate visas. Candidates should have working knowledge of protein biochemistry, immunology, and recombinant DNA technology. Previous experience with catecholamine enzymes desirable. Tissue culture experience helpful. Send curriculum vitae and three letters of reference to: **Dr. Dona L. Wong, Department of Psychiatry and Behavioral Science, Stanford University School of Medicine, Stanford, CA 94305**.

**POSTDOCTORAL POSITION** available 1 February 1986 for NIH-funded studies of helminth parasite antigens in blood of infected humans. Work involves laboratory work in St. Louis with short periods abroad for specimen collection and technology transfer. Ph.D./M.D. with strong biochemical/immunochemical background. Parasitology experience preferred, but not essential. Please send curriculum vitae and three references to: **Gary Weil, M.D., Jewish Hospital at Washington University Medical Center, 216 South Kingshighway, St. Louis, MO 63110**.

**POSTDOCTORAL POSITION** available 1 July 1986 for a recent Ph.D. in neurobiology. Research to involve the application of flow cytometric and molecular biological techniques to the study of dopamine-containing neurons maintained in monolayer tissue culture. Experience in tissue culture, monoclonal antibody production, and 2D gel electrophoresis preferred but not essential. Excellent research environment in a rapidly growing neuroscience community associated with Wayne State University. Salary: NIH equivalent. Duration: Minimum of 2 years. Send curriculum vitae and three letters of reference to: **Dr. G. Kapatos, Laboratory of Neurochemistry, Center for Cell Biology, Sinai Hospital of Detroit, 6767 West Outer Drive, Detroit, MI 48235**.

### POSTDOCTORAL POSITION IN TOXICOLOGY

NIH-sponsored positions (2 to 3 years) are available immediately. A recent Ph.D. in biochemistry, pharmacology, toxicology, or immunology required. Research interests include: development of in vitro toxicology systems, xenobiotic biotransformation by animal and human tissue, and the role of immune system in organ specific toxicity. Salary and benefits within NIH guidelines and experience. Please send curriculum vitae, and names of three references to: **I. Glenn Sipes, Ph.D., Department of Pharmacology and Toxicology, College of Pharmacy, Tucson, Arizona, 85721**.

*Equal Employment Opportunity/Affirmative Action Employer*

**POSTDOCTORAL AND PREDOCTORAL TRAINING PROGRAM IN DEVELOPMENTAL PSYCHOBIOLOGY.** This NICHD-supported program provides trainees with interdisciplinary training to conduct research on the development of learning and the role of early experience in the modulation of health and disease. Application deadline: 15 March 1986. Applicants should contact: **Dr. Jerry W. Rudy, Department of Psychology, Box 345, Boulder, Colorado, 80309**. *The University of Colorado is an Affirmative Action/Equal Opportunity Employer.*

**LOUISIANA STATE UNIVERSITY  
MEDICAL CENTER  
DEAN OF THE SCHOOL OF MEDICINE  
IN SHREVEPORT**

The Louisiana State University (LSU) Medical Center is seeking applications and nominations for the position of dean of the School of Medicine, in Shreveport. The former dean, Dr. Perry G. Rigby, became chancellor of LSU Medical Center effective 1 September 1985. The dean is the chief administrative officer of the School of Medicine and is responsible to the chancellor of the LSU Medical Center for the administration of all educational, research, and clinical programs conducted by the School of Medicine in Shreveport.

The school enrolls approximately 400 medical students, 290 house officers, 30 graduate students, and conducts continuing medical education programs. Clinical service programs are conducted at Louisiana State University Hospital, Shreveport Veterans Administration Medical Center, E. A. Conway Memorial Hospital in Monroe, Louisiana, and several affiliated institutions.

Louisiana State University is the major state institution of higher learning with seven campuses and 55,000 students. The School of Medicine in Shreveport is one of six professional schools in the LSU Medical Center which includes the schools of: Medicine in New Orleans, Dentistry, Nursing, Allied Health Professions, and Graduate Studies.

Applicants should have a M.D. or Ph.D. degree and considerable academic administrative experience. Applications and nominations should include curriculum vitae, the names of three references, and should be submitted by 1 February 1986 to:

Horace E. Thompson, M.D., Chairman  
Dean Search Committee (Box 600)  
LSU School of Medicine in Shreveport  
P.O. Box 33932  
Shreveport, LA 71130

*Louisiana State University is an Affirmative Action/Equal Opportunity Employer.*

**SCIENTIFIC EXCHANGES**

**NAS Scientific Exchange Programs  
with the U.S.S.R. and Eastern Europe**

The National Academy of Sciences (NAS) invites applications from American scientists who wish to make visits beginning during the period 1 September 1986, through 31 December 1987, to the U.S.S.R., Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania, and Yugoslavia. Long-term research visits of 3 to 12 months duration are encouraged, particularly if contact with colleagues in the other country has already been established. The minimum length of visits is 1 month in one country.

Applicants must be U.S. citizens and have a doctoral degree or its equivalent by the time of the intended visit in physics; chemistry; mathematics and computer sciences; earth, atmospheric, and oceanographic sciences; agricultural, forestry, fishery, and plant sciences; biological and medical sciences; environmental sciences; engineering; archaeology and anthropology; geography; or psychology. Also included are science and technology policy studies and other aspects of the economic and social sciences that involve quantitative analysis. Other scientific disciplines not explicitly mentioned will be considered on a case-by-case basis. Necessary expenses will be met by the NAS and the foreign academy, including reimbursement for long-term visitors for salary lost up to a predetermined maximum and expenses for accompanying family members for visits exceeding 5 months.

Requests for applications should reach the National Academy of Sciences not later than 14 February 1986. Application must be postmarked by 28 February 1986. Address application requests to:

National Academy of Sciences  
Office of International Affairs  
Soviet and East European Affairs  
2101 Constitution Avenue, NW  
Washington, DC 20418  
Telephone: 202-334-2644

**CHAIRPERSON  
DEPARTMENT OF ENTOMOLOGY  
MICHIGAN STATE UNIVERSITY  
EAST LANSING**

The Department of Entomology is seeking applications and nominations for a scientist to provide academic and administrative leadership in a highly diversified department which includes teaching, research, extension, and international functions in entomology and nematology. Criteria for selection include a Ph.D. in entomology, nematology, or in related biological sciences with demonstrated excellence and leadership in research, teaching, or extension programs. Position available 1 October 1986.

The department consists of 21 regular faculty, 12 joint-appointed and adjunct faculty, 45 graduate students, and a support staff of career professionals, technicians, secretaries, and part-time assistants. The department is administered by two colleges—the College of Natural Science and the College of Agriculture and Natural Resources. An annual appropriated budget of about \$1.4 million is more than matched by extramural sources. The department manages an on-campus field research facility, the off-campus Trevor Nichols Farm Complex, and has diversified research programs at the Kellogg Biological Station and other locations.

Applications are preferred by 15 February 1986 and should include curriculum vitae and a description of academic and administrative philosophies and career objectives. Include names, addresses, and telephone numbers of five references. Inquiries and applications, which will be treated in confidence, should be mailed to:

Dr. James Miller, Chairperson  
Search and Recommendation Committee  
Department of Entomology  
Michigan State University  
East Lansing, MI 48824-1115  
Telephone: 517-355-6619

*MSU is an Affirmative Action/Equal Opportunity Institution*

# Regional Medical Associates

## Pharmaceutical Marketing

Expansion opportunities have created openings in Chicago and St. Louis for Regional Medical Associates to combine scientific expertise and marketing skills. Responsibilities are to establish effective relationships within key medical institutions, providing scientific liaison and in-depth information essential to appropriate use of SK & F's products. Will also have training responsibility at the Representative, Medical Staff, and Pharmacy levels. Some travel involved.

Qualifications include PhD in Pharmacology, Biochemistry, Microbiology or other Life Sciences required. Must possess initiative, strong communication skills, and interest in Marketing.

In addition to an independent work environment where personal and professional growth are a way of life, we offer an outstanding compensation/benefits package geared to today's market. Please send resume and current earnings. Indicate on envelope area of interest - Chicago or St. Louis.

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Employer,  
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A SmithKline Beecham Company

## SUMMER 1986 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 1986. 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 9 June through 15 August 1986. The awards will be announced prior to the end of April 1986.

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 1986 Environmental Fellows will receive a taxable stipend of \$630 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 1986.*

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available 1 March 1986. Ph.D. in seed physiology or related plant science with experience in HPLC, GLC, spectrophotometry, and related laboratory equipment. Experience with seeds is desirable. Provide résumé, transcripts, and three letters of reference by 14 February 1986 to:

**Dr. J. C. Engibous, Chairman**  
Agronomy and Soils Department  
Washington State University  
Pullman, WA 99164-6420

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

**POSTDOCTORAL POSITION** available immediately to conduct studies on mechanisms of cisplatin cytotoxicity in cultured human carcinoma cells. Strong background in biochemical and molecular pharmacology required, including experience in DNA alkylation and purification. Knowledge of HPLC techniques, fluorometry, atomic absorption, and gel electrophoresis preferred. Experience in tissue culture, cell biology, flow cytometry, glutathione metabolism, and/or methods for measuring topoisomerase and poly(ADP-ribose)polymerase most desirable. Salary: \$20,000, plus generous fringe benefits. Send curriculum vitae, summary of research interests, and three letters of recommendation to: **B. Drewinko, M.D., Ph.D., Division of Laboratory Medicine, Box Number 73, University of Texas System Cancer Center, M.D. Anderson Hospital and Tumor Institute, 6723 Bertner Avenue, Houston, Texas 77030. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available immediately in research-intensive department for Ph.D. in biochemistry, cell biology, or related field. Research deals with the mechanism of expression and action of transforming growth factors. Experience in one or more of the following areas is required: receptor biochemistry; hybridoma technology; regulation of gene expression. Send curriculum vitae and names of three references to: **Dr. J. Massague, Department of Biochemistry, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA 01605. The University of Massachusetts Medical Center is an Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION—BIOPHYSICAL CHEMISTRY.** Available March 1986. Spectroscopic studies of polypeptide sequences of biological importance. Experience in solid-phase peptide synthesis required. Send curriculum vitae and two letters of recommendation by 8 February 1985 to: **Dr. Lila M. Gierasch, Department of Chemistry, University of Delaware, Newark, DE 19716.**

**POSTDOCTORAL POSITION IN VIROLOGY** is available immediately to study paramyxovirus genetics at the level of nucleotide sequence. Applicant should have experience in nucleic acid chemistry and/or virology. Send curriculum vitae and letters of recommendation before 1 February 1986 to: **Mark E. Peeples, Ph.D., Immunology/Microbiology Department, Rush Medical College, 1753 West Congress Parkway, Chicago, IL 60612. Rush Medical College is an Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL RESEARCH ASSOCIATE** position available for studies related to apolipoproteins and lipoproteins. Location: University of California, Irvine and Long Beach, California. Candidate should be interested in atherosclerosis research; background in biochemistry and immunology desirable. Experience in lipoprotein and apolipoprotein isolation, immunization, development and characterization of monoclonal and polyclonal antibodies, immunoassay, immunoblotting, chromatographic, and electrophoretic techniques important. Send curriculum vitae, summary of research experience, and names of three reference to: **Moti L. Kashyap, M.D., Box 270, SCIENCE.**

**POSTDOCTORAL RESEARCH ASSOCIATES:** Three positions are available immediately to study fast-kinetics of voltage-dependent calcium entry and endogenous neurotransmitter release in brain. Two individuals will study the neurochemistry and the third will study the pharmacology of these processes. Salaries will be \$18,000 to \$22,000, based on experience. Contact: **Dr. Steven W. Leslie, Division of Pharmacology, College of Pharmacy, The University of Texas at Austin, Austin, TX 78712; telephone: 512-471-4112. The University of Texas is an Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

**POSTDOCTORAL RESEARCHERS.** Our Protein Biochemistry Department has openings for postdoctoral researchers to perform basic research in a variety of areas. Successful candidates will have a Ph.D. in protein biochemistry or another relevant degree with a record of scientific excellence throughout their graduate work.

Genentech offers an excellent compensation and benefits package, coupled with the opportunity to make a significant contribution to our organization. Please send résumé to: **Human Resources Department EM, Genentech, Inc., 460 Point San Bruno Boulevard, South San Francisco, CA 94080. An Equal Opportunity Employer.**

**POSTDOCTORAL RESEARCH ASSOCIATE** position is open for experimental and/or theoretical work on the conformation of nucleic acids. Starting salary: \$18,000. Please send curriculum vitae and names, addresses, and telephone numbers for three references to: **W. Curtis Johnson, Department of Biochemistry and Biophysics, Oregon State University, Corvallis, Oregon 97332. No decision before 20 January 1986, but closing may be extended. Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973.**

### POSTDOCTORAL RESEARCH ASSOCIATE

Position now available in tumor biology to study mechanisms involved in cancer metastasis. Studies include biochemical characterization of cell surface markers linked to the metastatic phenotype, quantitation and isolation of metastatic variants by flow cytometry, and a detailed investigation of environmental conditions affecting the generation and emergence of highly metastatic tumor variants.

Applicants must hold a M.D., Ph.D., or D.V.M. degree and have experience in cell culture, hybridoma technology, flow cytometry, membrane biochemistry, and immunopathology. Salary negotiable and dependent upon experience.

Interested candidates please send curriculum vitae to:

**Dr. A. Kimura**  
Department of Pathology, Box J-275  
College of Medicine  
University of Florida  
Gainesville, FL 32610

*Equal Opportunity Employment/Affirmative Action Employer*

**POSTDOCTORAL RESEARCH ASSOCIATE** position available to study the role of phosphoinositides in receptor function in smooth muscle. Applicants should have a recent Ph.D. in biochemistry or pharmacology. Send curriculum vitae and names of three references to: **Dr. Ata Abdel-Latif, Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, GA 30912-3331. An Equal Opportunity/Affirmative Action Employer. J3624.**

**POSTDOCTORAL RESEARCH ASSOCIATE** position available immediately for research in areas related to carcinogen-DNA adduct formation, DNA excision repair, DNA polymerase alpha purification and function. Background and interest in biochemistry, genetics, immunology, cell biology, molecular biology, cell culture, or toxicology desirable. Recent Ph.D. in one of the above areas preferred. Starting salary: \$18,000 to \$20,000, depending on qualifications. Contact: **Dr. David L. Busbee, Division of Toxicology, College of Veterinary Medicine, Texas A & M University, College Station, TX 77843. Telephone: 409-845-2050.**

**POSTDOCTORAL RESEARCH ASSOCIATE POSITION IN MOLECULAR PARASITOLOGY** available immediately to conduct research on the molecular biology of *Trypanosoma brucei*, the causative agent of African trypanosomiasis. Research involves recombinant DNA studies on mitochondrial and nuclear DNA in trypanosomes. Experience with recombinant DNA technology essential. Appointment is for 2 years at initial salary of \$20,000 to \$25,000. Applicant should send curriculum vitae with references to:

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

## POSITIONS OPEN

**POSTDOCTORAL RESEARCH ASSOCIATE** position available immediately to study mechanisms of sugar transport in *Escherichia coli* using biochemical and molecular biological approaches. Salary is commensurate with experience, and position includes excellent fringe benefits. Send curriculum vitae and three letters of reference to: **Dr. Gary R. Jacobson, Department of Biology, Boston University, 2 Cummington Street, Boston, MA 02215. Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL RESEARCH ASSOCIATE.** Research involving continuum mechanical analysis of macroscopic and microscopic aspects of creep fracture focusing on material failure due to cavitation damage at high temperatures. Ph.D. in solid mechanics required. Must have knowledge of inelastic mechanics of materials, finite element analysis, and integral equations. One year of research experience in creep fracture mechanics and familiarity with VAX 785 computer is desirable. Responsibilities include working with graduate students who are conducting research in this area. Salary: \$22,550 per year. Résumés to: **Philadelphia Job Bank, 444 North 3rd Street, Philadelphia, PA 19123. Refer to Number 407-4383.**

### POSTDOCTORAL RESEARCH POSITION TREE GROWTH AND WOOD FORMATION

A postdoctoral research position is available to study causes of patterned variation in wood structure within trees. Research will focus on effects of apical and cambial development and photohormone levels on xylem differentiation. The position will be under the direction of **Dr. Richard Dodd**, and will be available from 1 March 1986, initially for an 18-month period, with a possibility for renewal. Salary will be \$20,904 per annum. Interested applicants, with a background in plant physiology and plant anatomy or related fields, should send curriculum vitae, reprints of publications, and three letters of recommendation by 15 February 1986 to: **Dr. Richard Dodd, University of California, Berkeley, Forest Products Laboratory, 1301 South 46 Street, Richmond, California 94804.**

**POSTDOCTORAL STAFF ASSOCIATE(S).** Research on control of eukaryotic gene expression. Knowledge of hybrid gene construction, transfection, cell-free transcription, and so forth. Send curriculum vitae to: **Dr. P. Feigelson, Department of Biochemistry and Molecular Biophysics, Institute of Cancer Research, Columbia University, 701 West 168 Street, New York, NY 10032. Columbia University Takes Affirmative Action to Insure Equal Opportunity.**

**POSTDOCTORAL TRAINING IN INSECT NEUROBIOLOGY.** The Arizona Research Laboratories Division of Neurobiology expects to have several openings in the next 2 years for postdoctoral fellows interested in cellular, molecular, developmental, and behavioral neurobiology of insects. Inquiries and applications should be sent to: **Dr. John G. Hildebrand, Director, ARL Division of Neurobiology, 603 Gould-Simpson Science Building, University of Arizona, Tucson, AZ 85721. The University of Arizona is an Equal Opportunity/Affirmative Action Employer.**

**PROTEIN BIOCHEMIST.** Position available immediately for Ph.D. level postdoctoral research associate to study enzyme kinetics on oncogene products. Experience with protein purification. Send résumé and two letters of recommendation to: **Dr. James Tam, Box 294, Rockefeller University, 1230 York Avenue, New York, NY 10021. Equal Employment Opportunity/Affirmative Action Employer.**

**RESEARCH ASSOCIATE**—Position available immediately for research on stress, sympathetic nervous system function, and experimental hypertension. Send curriculum vitae, and names of three references to: **Dr. Richard McCarty, Department of Psychology, 102 Gilmer Hall, University of Virginia, Charlottesville, VA 22903, telephone: 804-924-0679.**

**RESEARCH ASSOCIATE.** Ph.D. with postdoctoral experience in lipoprotein research. Salary: \$26,000 (Canadian), depending on qualifications. *Preference given to Canadian citizens or landed immigrants to Canada.* Send résumé and references to: **Dr. Kenneth K. Carroll, Department of Biochemistry, University of Western Ontario, London, Ontario, Canada, N6A 5C1.**

**NORTHEASTERN OHIO UNIVERSITIES COLLEGE OF MEDICINE SEEKS CANDIDATES FOR TENURE TRACK 12 MONTH APPOINTMENT FACULTY POSITIONS FOR EXPANDING PROGRAMS IN THE FOLLOWING BASIC SCIENCE FIELDS:**

**ASSISTANT PROFESSOR OF ANATOMY** Ph.D. or M.D. degree with a record of productivity in research and teaching experience in histology.

**ASSISTANT PROFESSOR OF BEHAVIORAL SCIENCES** Ph.D. or equivalent with an active research program in the areas of medical psychology or sociology, behavioral biology, or behavioral medicine.

**ASSISTANT PROFESSOR OF BIOCHEMISTRY** Ph.D. with experience in biomedical Mass Spectrometry. Duties include teaching of medical and graduate students, participation in independent or cooperative research, and the running of the biomedical Mass Spectrometer Laboratory.

**ASSISTANT PROFESSOR OF MICROBIOLOGY/IMMUNOLOGY** Ph.D. with interests in immunology or bacteriology preferred.

**ASSOCIATE PROFESSOR OF PHARMACOLOGY** Ph.D. in Pharmacology with minimum of four years teaching experience in a medical school at the Assistant Professor level. Research interests in behavioral pharmacology, neurochemistry (HPLC) and/or receptor binding preferred.

Northeastern Ohio Universities College of Medicine, a consortium of the University of Akron, Kent State University, and Youngstown State University in association with eight community teaching hospitals in northeastern Ohio, offers a combined B.S./M.D. degree program.

Candidates should send curriculum vitae indicating specific position of interest, bibliography, statement of teaching, research experience, and funding together with names and addresses of three references. Deadline extended to February 1, 1986. Respond to **Office of Human Resources, Northeastern Ohio Universities College of Medicine, Rootstown, Ohio 44272**. An affirmative action/equal opportunity employer.

## NCI POSTDOCTORAL POSITION

POSTDOCTORAL POSITION in the field of molecular biology of carcinogenesis available immediately. Recent Ph.D. with less than 3 years of postdoctoral experience sought to clone and characterize novel transforming gene(s) (Molecular Cellular Biology, 5:890-893, 1985) that appear to be activated by tumor promoters. Experience with recombinant DNA techniques and concepts desirable. Appointment for 2 to 3 years. Salary commensurate with qualifications. U.S. Citizenship or Permanent Residency required. Submit letter of interest, one-page statement of research goals, curriculum vitae, and 3 or more letters of reference to:

**Dr. Nancy H. Colburn, Chief  
Cell Biology Section  
Laboratory of Viral Carcinogenesis  
National Cancer Institute  
National Institutes of Health  
Frederick, Maryland 21701  
(301) 695-1342 or (301) 695-1333**

*NIH is an Equal Opportunity Employer*

## MOLECULAR BIOLOGIST Ph.D.

Immunex Corporation, a Seattle-based multidisciplinary research and development company focusing on the regulation of the immune system by lymphokines, has a vacancy for a molecular biologist. The appointment will be at a level commensurate with the qualifications of the applicant. Applicants with postdoctoral training will, in general, be given preference.

The successful candidate will join a vigorous molecular biology group working on lymphokines, lymphokine receptors and oncogenes, and will assume responsibilities relating to the expression of such proteins in *E. coli* or other procaryotic organisms. Experience in expression is required; other advantageous qualities include interest or experience in immunological systems, and an ability to work cooperatively in a multidisciplinary group setting.

Immunex offers competitive salaries, an equity participation program, and a generous fringe benefits package. To apply, please send resume and names of three references to the **Personnel Officer, Immunex Corporation, 51 University Street, Seattle, Washington 98101 U.S.A.** Immunex Corporation is an equal opportunity employer.

**IMMUNEX**

## PhD OPPORTUNITY

Due to continued growth, Merrell Dow Research Institute has an immediate opportunity available at our Research Institute in Cincinnati, Ohio.

Candidate should have a PhD in pharmacology, biochemistry or a related area with a strong biological orientation with 1-3 years of postdoctoral experience. Our laboratory is primarily involved with the study of ornithine decarboxylase and the other aspects of polyamine biosynthesis, metabolism and function in parasitic protozoa (e.g. trypanosomes). This work is focused on the use of irreversible inhibitors of ornithine decarboxylase as novel antiprotozoal agents. Work on several other metabolic pathways in parasitic protozoa, including nucleoside/nucleotide biosynthesis, is in progress. Experience with enzyme assays, enzyme purification, HPLC, cell culture techniques and small animal handling is desirable. The successful candidate will be involved in identifying potential enzyme targets for the development of new chemotherapeutic agents for the treatment of parasitic diseases.

Merrell Dow Research Institute is a subsidiary of Dow Chemical and offers excellent compensation, comprehensive benefits and relocation assistance. If you are interested and would like to work for a rapidly growing research institute, send your curriculum vitae with names of three references to:

**Personnel Services Manager**

**Merrell Dow**

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



## POSITIONS OPEN

**POSTDOCTORAL RESEARCH ASSOCIATE** positions (available January 1986) for at least 2 years to study catecholaminergic neurons in animals and man using neuroanatomical and/or electrophysiological techniques. Must have experience with either or both techniques. Send curriculum vitae and the names of three references to: **Dr. D. C. German, Department of Psychiatry, University of Texas Health Science Center, Dallas, Texas 75235. An Affirmative Action/Equal Opportunity Employer.**



## PROFESSOR AND HEAD

Applicants are invited for the position of professor and head of the Department of Medical Microbiology at the Faculty of Medicine, University of Manitoba. Candidates should have a substantial record of academic achievement in medical microbiology and extensive experience in teaching and in clinical or basic research, as well as proven administrative experience. Clinical expertise is an asset. The department is responsible for programs of education at the undergraduate, graduate, and postgraduate (clinical) levels. *Both women and men are encouraged to apply. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.* Applications and nominations should be accompanied by curriculum vitae and submitted no later than 28 February 1986 to: **Dr. F. C. Stevens, Chair, Medical Microbiology, Search Committee, Faculty of Medicine, University of Manitoba, 753 McDermot Avenue, Winnipeg, Manitoba, Canada R3E 0W3.**

## DISTINGUISHED PROFESSOR OF MEDICINAL CHEMISTRY

The Department of Medicinal Chemistry and Pharmacognosy, School of Pharmacy and Pharmacal Sciences, Purdue University, is seeking candidates at the level of distinguished professor for a position in anticancer drug design. The applicants should have a background in medicinal or organic chemistry and an outstanding record of research. The department has strong programs in medicinal chemistry and pharmacognosy research that interface with several interdisciplinary programs. The successful applicant will be expected to contribute significantly to one or more of those programs as well as have an opportunity to interact with the drug design program area of the Purdue University Cancer Center. Applicants should send their curriculum vitae, description of research interests, and the names of three references on or before 15 February 1986 to: **Professor John M. Cassidy, Head, Department of Medicinal Chemistry and Pharmacognosy, Robert E. Heine Pharmacy Building, Purdue University, West Lafayette, IN 47907. Purdue University is an Affirmative Action/Equal Opportunity Employer; applications from minorities are encouraged.**

**RESEARCH ASSISTANT PROFESSOR** (nontenure track). Regular Duties: RIA and purification of neuropeptides, structure-function studies on the VIP-receptor, adenylate cyclase assay, poly- and monoclonal antibody production, assay of autoantibodies and their neutralization, and cytotoxic activity. Qualifications: Ph.D. in biochemistry with 3 years of experience in biochemical and immunologic research, skills in RIA, ELISA, HPLC, electrophoresis, receptor assay, protein purification, monoclonal antibody production, tissue culture, autoantibody, and cytotoxicity assay. A strong publication record and ability to compete for research funds. Salary: \$30,000 per year. Working hours: 8:30 a.m. to 5:00 p.m., 40 hours per week. Send application with three letters of reference to: **Oklahoma Employment Security Commission, 8720 S.E. 15th Street, Midwest City, Oklahoma 73110. Refer to Job Order Number 090659.**

**RESEARCH ASSOCIATE:** Full-time research Ph.D. in physical organic chemistry with experience in synthesis and photochemistry of organophosphorus compounds including isotope labeling compounds, operation of high-field NMR ( $^1\text{H}$ ,  $^{13}\text{C}$ ,  $^{31}\text{P}$ ,  $^2\text{H}$ ), and thermal and photo CIDNP chemistry. Forty hours per week; \$17,500 per year. Send résumé and three letters of recommendation to: **Utah Job Service, 1234 South Main Street, Salt Lake City, Utah 84147. Refer to Job Order Number 41950.**

## POSITIONS OPEN

**DISTINGUISHED PROFESSOR, EXPERIMENTAL PSYCHOLOGY.** A leading scientist within general learning, memory, cognition area. Reduced teaching and some research/secretarial assistance. A productive, continuing research program essential. Appointment August 1987. Address confidential inquiries to: **Frank Logan (Chair), Henry Ellis, Douglas Ferraro, G. Robert Grice, or Peder Johnson, Department of Psychology, University of New Mexico, Albuquerque, NM 87131. Deadline: 31 March 1986. Affirmative Action/Equal Opportunity Employer.**

## REPRODUCTIVE BIOLOGISTS

The Department of Biological Sciences at Kent State University announces the opening of two tenure-track faculty positions to support its expanding program in mammalian reproductive biology. Research training and experience should be at the cellular and/or molecular level. The successful candidates will be expected to pursue strong research programs in areas complementing the interests of the current faculty, collaborate in joint research projects, participate in recruiting and advising M.S. and Ph.D. students, and seek extramural funding. Effective date is August 1986.

**POSITION I:** An appointment will be made at the assistant, associate, or full professor level. Rank and salary will depend upon qualifications and experience, particularly the record of publication and grant support. The primary area of teaching will be in human physiology at the undergraduate level and in a graduate course in reproductive physiology.

**POSITION II:** An assistant professor will be appointed who will have responsibility for undergraduate teaching in the area of developmental biology and in the graduate area of his or her specialty. Postdoctoral experience is essential. Salary will depend upon qualifications, experience, and potential.

Send résumé, statement of research aims, copies of transcripts, and three letters of recommendation by 1 February 1986 to: **Dr. Walter C. Adams, Professor, Department of Biological Sciences, Box 2, Kent State University, Kent, OH 44242. An Affirmative Action/Equal Opportunity Employer.**

**RESEARCH ASSISTANT/ASSOCIATE** required for cancer pharmacology program. Must have B.Sc. and a minimum of 1 year's experience in tissue culture methods. Knowledge of HPLC, molecular biology, and small animal surgery helpful. Salary: \$15,000 to \$18,000 per year, depending on experience. Replies to: **Dawn Crable, Personnel Services, 401 South Grant Street, West Lafayette, IN 47907. Purdue University is an Equal Opportunity/Affirmative Action Employer.**

**RESEARCH ASSISTANT PROFESSOR** with the expertise for preparing anti-sense vectors. Opportunities exist for collaborations on studies of the assembly of myofibrils and of the cytoskeletal elements in a variety of normal cell types using the appropriate constructs. A letter of application and curriculum vitae should be sent to: **Dr. Frank A. Pepe, Chairman, Department of Anatomy, University of Pennsylvania, Philadelphia, Pennsylvania 19104-6058. The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.**

**RESEARCH ASSOCIATE**, biochemistry, molecular biology, or allied science Ph.D.; to study heme biosynthetic enzymes using monoclonal antibody technology. Initial 1-year appointment, possible renewal. Résumé to: **M. B. Poh-Fitzpatrick, Department of Dermatology, Columbia University College of Physical & Surgery, 630 West 168 Street, New York, NY 10032. Affirmative Action/Equal Opportunity Employer.**

**RESEARCH ENVIRONMENTAL SCIENTIST.** Environmental Protection Agency's (EPA) Environmental Research Laboratory at Narragansett, Rhode Island, conducts research on the fate and effects of complex pollutants in marine environments. A permanent position is available in the laboratory's Marine Processes Division for an environmental scientist GS-12, salary range \$31,619 to \$41,105, to develop and apply statistical models for describing environmental processes related to transport, transformation, and fate of pollutants in estuarine, coastal, and open ocean areas. Applicants must have a Ph.D. or equivalent experience and be a U.S. citizen. For further information, contact: **Brenda Laing, U.S.-EPA, South Ferry Road, Narragansett, RI 02882; telephone: 401-789-1071 before 24 January 1986. An Equal Opportunity Employer.**

## POSITIONS OPEN

**RADIATION SAFETY OFFICER.** Candidates are being sought who will be responsible for the maintenance of a comprehensive radiation safety program at Wright State University and Kettering Medical Center. The University conducts activities under three NRC licenses (Type A Broad, Special Nuclear Material, and Neutron Generator) and State of Ohio Registrations. The program consists of activities in the educational, research, medical, and maintenance elements of the university community. The Kettering Medical Center conducts activities under a specific License for Diagnostic Nuclear Medicine and State of Ohio Registrations to include one and possibly two accelerators. A Ph.D. degree in health physics, radiological health, radiation biology, or equivalent is required with sufficient experience to meet minimum qualifications for an NRC-approved radiation safety officer in order to direct the Radiation Safety Office at Wright State University and Kettering Medical Center. Send résumé and three references by 31 January 1986 to: **Dr. Albert E. Langley, Chair, Search Committee for Radiation Safety Officer, School of Medicine, Wright State University, Dayton, Ohio 45435. Wright State University is an Affirmative Action/Equal Opportunity Employer.**

## RESEARCH ASSOCIATE IN TUMOR IMMUNOLOGY

The Harrington Cancer Center, Amarillo, Texas, wishes to recruit two positions for a research group in tumor immunology which will focus on the biology of B cell lymphomas. Candidates should possess a Ph.D. or M.D. degree and several years of postdoctoral experience in areas of monoclonal antibodies, recombinant DNA procedures, histocompatibility antigens, or related fields of investigation. Send curriculum vitae to: **Dr. John Morrow, Department of Biochemistry, Texas Tech University Health Sciences Center, Lubbock, Tex. 79430.**

**RESEARCH ASSOCIATE** position(s) available immediately for individuals who qualify in some segment of the broad area of microbial physiologist/biochemist/molecular biologist. Ph.D. required. Duties involve laboratory research into cell differentiation in prokaryotes. The research is concerned with encystment in *Azotobacter vinelandii* and deals specifically with several aspects of the synthesis, function, and occurrence of *n*-alkyl resorcinols and pyrones. These unique lipids have been shown to replace phospholipids during encystment of *A. vinelandii* and constitute greater than 95 percent of the cyst membrane lipids. Send résumé, names of references, and date of availability to: **H. L. Sadoff, Department of Microbiology, Michigan State University, East Lansing, MI 48824-1101; telephone: 517-355-6513. An Equal Opportunity/Affirmative Action Institution.**

## UNIVERSITY OF ALBERTA DEPARTMENT OF PHYSIOLOGY

The Department of Physiology invites applications for a position as **RESEARCH SCHOLAR** at the assistant professor rank. The successful candidate must have a Ph.D. degree and have demonstrated outstanding ability for independent research. Preference will be given to investigators with experience in renal physiology and/or neurophysiology. The successful candidate will also be expected to participate in the department's teaching program. This position will be funded through an external agency such as The Alberta Heritage Foundation for Medical Research (AHFMR), but the successful candidate will enjoy the privileges of the university rank of assistant professor. AHFMR also offers establishment grants for setting up a well-equipped laboratory and for initial operating expenses to the successful candidate. *The University of Alberta is an Equal Opportunity Employer, but in accordance with Canadian employment and immigration regulations, this advertisement is directed to Canadian citizens and permanent residents.* Interested applicants should send their curriculum vitae, an outline of their proposed research, and the names of three referees before 1 February 1986 to:

**The Chairman  
Department of Physiology  
University of Alberta  
Edmonton, Alberta,  
Canada T6G 2H7**

## AAAS PROJECT DIRECTOR

The American Association for the Advancement of Science (AAAS) seeks a director of its Project on Population, Resources, and the Environment. This project is designed to develop an intellectual and analytical framework for problems which lie at the intersection of population, resource, and environmental studies, and relate this to the needs and concerns of decision makers in the U.S. and overseas.

The position requires an advanced degree in a relevant area and 5 years experience in project/program management (or an equivalent combination of education and experience). The successful candidate will have substantial experience in managing projects with the general characteristics of the AAAS program, but not necessarily the same substantive content. Experience should also include the ability to: secure the cooperation of people with widely different backgrounds and goals, and to reconcile varying views; write cogent analyses, proposals, reports, position papers, and so forth quickly and easily and to revise prose flexibly in response to criticism; and reduce general ideas to practical programs.

Incumbent should have demonstrated ability to: direct research and analytical programs of substantial complexity; work with governmental agencies, Congress, professional associations, private organizations and foundations; manage budgets; supervise staff; and work with advisory committees. Foreign travel and interaction with foreign scientific and engineering organizations is expected.

Project is currently funded through 1987. Continuation will depend on outside support.

Interested applicants should submit letter of application, résumé, and salary requirements to: **Carolyn Bell, AAAS, 1333 H Street, NW, Room 854, Washington, DC 20005.**

*Equal Opportunity Employer*

## IN-HOUSE COUNSEL PATENT ATTORNEY

IMMUNEX CORPORATION, a Seattle-based biotechnology company, is seeking an experienced patent attorney to head a newly created Legal Department. The successful candidate will have at least an undergraduate degree in biology or chemistry, in addition to a legal degree. 3-5 years prior experience in a patent law firm or a corporate patent law department is essential, preferably involving biotechnology patents. Some prior experience in molecular biology research would also be regarded as significant.

Immunex's in-house counsel will perform patent attorney duties ranging from preparation and prosecution of patent applications through enforcement of the Company's patents. Also, he/she will be responsible for administering an intellectual property confidentiality program and will be involved in licensing and contract activities.

The Company offers competitive salaries, an equity participation program, and a generous fringe benefits package. To apply, please submit resume to the **Personnel Officer, Immunex Corporation, 51 University Street, Seattle, Washington 98101.** Immunex Corporation is an equal opportunity employer.

# IMMUNEX

## NATIONAL INSTITUTES OF HEALTH Fellowships in Molecular Genetics

The Molecular and Medical Genetics Section of the Developmental and Metabolic Neurology Branch, National Institute of Neurological and Communicative Disorders and Stroke, National Institutes of Health, Public Health Service, invite applications for medical staff and research fellowship positions to study the molecular aspects of inherited disorders. Research opportunities involve utilization of recombinant DNA techniques to investigate: 1) effects of mutation on expression and translocation of proteins and enzymes related to neuro-genetic disorders; 2) developmentally regulated expression of neural and glial specific proteins; and 3) somatic cell gene therapy. Participation in the NIH Interinstitute Medical Genetics program is also possible. Medical fellowships are filled through the NIH Medical Staff Fellowships Program and appointments are made for two or three years. Applicants for clinical fellowships should have completed residency training. Starting salary is \$30,000 per annum. Research fellowships are filled through the NIH Visiting, NIH Staff or Senior Staff Fellowship Programs and appointments vary in duration from three to seven years. Stipend is determined by the candidate's educational and professional experience. All positions are located in Bethesda, Maryland.

Applications are invited from exceptionally qualified individuals having the Ph.D., M.D., or combined degrees, and pertinent clinical and/or research experience. NIH is an equal opportunity employer. Applications from women and minorities are invited. Interested candidates should submit their curriculum vitae to or request further information from:

**Dr. John Barranger or Dr. Edward Ginns**  
Molecular and Medical Genetics Section  
DMNB, NINCDS  
Building 10, Room 4N248  
National Institutes of Health  
Bethesda, Maryland 20892 (301) 496-1465

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## POSITIONS OPEN

**SCIENTIFIC RESEARCH INSTITUTE** is seeking candidates for a **RESEARCH POSITION** to begin early 1986. The successful applicant will conduct analytical and preparative protein chemistry, peptide, and protein purification and characterization. Candidates should have a B.S. or M.S. in protein chemistry with at least 3 years of laboratory experience with HPLC of peptides, proteins, amino acids, and SDS-PAGE. Knowledge of protein sequencing and amino acid analysis is preferred. Interested applicants should forward résumé with three letters of reference to:

**Personnel Manager**  
**W. ALTON JONES CELL SCIENCE CENTER,**  
10 Old Barn Road  
Lake Placid, New York 12946  
Please refer to Job Order CR510

*An Affirmative Action/Equal Opportunity Employer*

### SLOAN-KETTERING INSTITUTE SENIOR AND JUNIOR RESEARCH POSITIONS

Available immediately to study the structure and function of lymphocyte surface differentiation antigens and interaction molecules and their genetic determinants. Applicants should have postdoctoral experience in immunogenetics and immunochemistry. For the senior position (\$30,450), a Ph.D. in biology or biochemistry and at least 3 years of postdoctoral experience is required. Junior position salary commensurate with experience. Preference will be given to candidates with experience in isolation and characterization of cell membrane proteins and/or in gene cloning techniques.

Send curriculum vitae, summary of research experience, and names of referees to:

**Dr. Ulrich Hammerling,**  
Department of Immunochimistry  
Memorial Sloan-Kettering Cancer Center  
1275 York Avenue—321C  
New York, New York 10021

*Sloan-Kettering Institute is an Equal Opportunity/Affirmative Action Employer*

**DEPARTMENT OF PSYCHOLOGY, COLUMBIA UNIVERSITY,** anticipates making an appointment in human experimental psychology this coming year. The appointment may be a **SENIOR PSYCHOLOGIST** at the level of professor with tenure, for an outstanding teacher with a record of significant scientific contributions and an ongoing program of research, but we are also open to applications at levels of tenured **associate** and nontenured **assistant professor**. Our preference as to areas is in cognitive psychology, but we will consider applications from outstanding individuals whose specialties are not presently represented in the department. We are especially interested in considering applications from women and minority group members. Applicants should submit their curriculum vitae along with the names of at least three individuals who are willing to write letters of recommendation to: **Personnel Search Committee, Department of Psychology, Box 28 Schermerhorn Hall, New York, NY 10027.** *Columbia University is an Affirmative Action/Equal Opportunity Employer.*

**STAFF RESEARCH INVESTIGATOR.** Molecular biological research in cardiovascular disease. Required Ph.D. in biochemistry, with 2 to 3 years of postdoctoral research in molecular biology, including gene promoter assays, nucleotide sequencing, gene transfer techniques, and construction of cloning vectors. Salary: \$34,200 per year. Job Site: San Francisco, CA. Send this ad and résumé to: **NOF Job Number 5384, Employment Development Department, P.O. Box 9560, Sacramento, CA 95823-0560,** not later than 18 January 1986.

**SYSTEMS ANALYSIS/MODELLING.** Assistant/associate professor, 12-month, tenure-accruing position beginning 1 September 1986. Expertise required in systems analysis/modelling of ecological function and managerial strategies of rangelands at the population and community levels. Ph.D. in range science, plant ecology, or closely related area required. Submit letter of application, curriculum vitae, and three letters of reference to: **Dr. J. L. Schuster, Department of Range Science, Texas A&M University, College Station, Texas 77843; telephone: 409-845-5579.** Application deadline is 21 February 1986. *Texas A&M is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**STAFF POSITION**—Applications are invited for a position requiring experience in molecular biology and recombinant DNA techniques including sequencing, isolation of eukaryotic genes and site-directed mutagenesis. Other qualifications which will be considered are the diagnosis of various genetic diseases and oncogenes by hybridization analysis. Ph.D. required. The successful candidate will be provided the opportunity to develop his or her research program in a health-related area. Starting salary \$29,491. Excellent research facilities and benefits. Send résumé to: **Dr. Frank Maley, New York State Department of Health, Wadsworth Center for Laboratories and Research, Empire State Plaza, Albany, NY 12201.**

**SYNTHETIC ORGANIC CHEMISTS**—Assistant Professor and Research Associate/Postdoctoral Fellow. A research group focusing on drug synthesis of new antitumor agents is seeking Ph.D. chemists possessing state-of-the-art laboratory skills and knowledge of synthetic methodology. Position availability begins 1 February 1986, and will continue until we employ promising, highly motivated applicants. Funding for research associate or postdoctoral fellow position is available for up to 2 years. The assistant professor position is ongoing. This excellent non-teaching opportunity requires a proven record of productivity. Send résumé to: **Department of Chemotherapy Research, Box 52, The University of Texas System, Cancer Center, 6723 Bertner Avenue, Houston, TX 77030.**

*An Equal Opportunity/Affirmative Action Employer*

**SYSTEMS ANALYST** for software development firm in northeastern Ohio to design artificial intelligence software systems for business applications using general systems approach to accommodate a spectrum of alternative theories and assumptions. Design for judgmental and subjective aspects of reality which are prevalent because of uncertainties and lack of information. To provide a systems approach for assimilating change to the parameters and structure during analysis or the decision-making process itself rather than only before or after the process. Requires M.S. degree in systems engineering. Other systems theory as documented by at least one graduate course in the area; participation in research projects on world system models; some experience, or at least exposure, to the use of such models in public and private sectors is essential; and proven research ability (thesis) in interactive multicriteria decision analysis and original software development, particularly in relationship to mathematical general systems theory, world system models, and models in the public and private sectors. Forty-hour week; \$29,000 per year. Send résumé with this ad to: **Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, Ohio 43216, Attention: Job Number 0275045, L. Ellison.**

### VETERINARY ANATOMIST

The Department of Anatomy, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, invites applications for a tenure-track position at the assistant professor or associate professor level. Candidates for the position should have a Ph.D. degree in anatomy. A D.V.M. degree is desirable. The position entails teaching in all phases of anatomy in the professional veterinary medical curriculum and maintaining an active research program. Salary and rank will be commensurate with qualifications and experience. Applicants for the position should send a letter stating their professional goals and teaching experience in veterinary anatomy, curriculum vitae, and the names of three references. Applications should be submitted before 1 March 1986 to: **Dr. Robert A. Kainer, Chairman, Search Committee, Department of Anatomy, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, Colorado 80523.** *Colorado State University is an Equal Opportunity Employer.*

**VISITING SCIENTIST** positions are available for new and established Ph.D.'s and/or M.D.'s in the areas of cell and molecular biology. Some experience in either area is desirable, but not essential. Appointments will be made for at least 2 years at an annual salary up to \$25,000, depending on qualifications and experience. Interested applicants should send curriculum vitae and three names of reference to: **Personnel Manager, W. ALTON JONES CELL SCIENCE CENTER, 10 Old Barn Road, Lake Placid, New York 12946.** Please refer to Job Order VS-8508.

*An Affirmative Action-Equal Opportunity Employer.*

## POSITIONS OPEN

The University of Michigan, School of Natural Resources, is seeking to fill a full-time, 9-month, tenure-track position in **STREAM ECOLOGY**. The position is for an assistant professorship and includes 50 percent teaching. The major teaching and research activities will be in the graduate program in aquatic resource management, but will also include school-wide teaching in an interdisciplinary professional school focusing on renewable natural resources and the environment. The position may include a joint appointment with the Great Lakes Marine and Water Center if the candidate's qualifications are appropriate. The starting date is negotiable within a 1 September 1986 to 1 September 1987 time period.

Applicants must have an earned Ph.D. in aquatic ecology or an allied field with specialization in stream ecology. Postdoctoral research experience is desirable. Candidates with interests in application of stream ecology to stream management, water quality, or fishery management are particularly sought. Excellence in both teaching and research is emphasized.

Applicants should submit college transcripts, curriculum vitae, three letters of recommendation, and reprints of one or two key publications by 1 February 1986 to: **Dr. James E. Crowfoot, Dean, School of Natural Resources, The University of Michigan, Ann Arbor, MI 48109-1115. Telephone: 313-764-2550.**

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

**VETERINARIAN**—Jefferson Medical College, of Thomas Jefferson University, invites applications for the position of veterinarian. The veterinarian serves to develop, implement, and monitor faculty compliance with animal care standards and maintain appropriate accreditation status. The veterinarian also has responsibility for the oversight of the central animal facilities, monitoring of satellite facilities, and for the provision of veterinary care to all laboratory animals at the university. Thomas Jefferson University is currently accredited by the American Association for the Accreditation of Laboratory Animal Care (AAALAC).

Candidates must hold D.V.M. or equivalent degree from an accredited school of veterinary medicine, and be certified by, or eligible for, certification by American College of Laboratory Medicine or have equivalent qualifications. A record of independent research activity is highly desirable. The position offers the possibility for a concurrent appointment in one of the basic science departments of Jefferson Medical College, depending upon qualifications. The position is available immediately. Applicants should submit curriculum vitae with three letters of reference to: **Chairman, Veterinarian Selection Committee, Office of Research Administration, Jefferson Medical College, 1020 Locust Street, Philadelphia, PA 19107.** *Equal Opportunity Employer/Affirmative Action Employer.*

### WILDLIFE SCIENTIST

Will participate in studies assessing the effects of oil field activities on endangered species and their habitats. Primary duties will involve reduction and synthesis of existing data sets and preparation of reports. Other duties will include live-trapping and handling of wildlife, radiotelemetry, conduct of preconstruction surveys, and similar field tasks. Emphasis will be on synthesis and writing vs. field tasks. Work will be primarily at the U.S. Department of Energy's petroleum reserve near Bakersfield, California, with possibility of tasks at the Nevada Test Site or other federal sites. Minimum of B.S. in life sciences, wildlife management, ecological sciences or related field, plus 3 to 4 years of recent related experience/education. Must have demonstrated past experience and capabilities in data synthesis and preparation of professional scientific reports. Prior experience in handling wild animals, radiotelemetry, computerized word-processing, data-handling, statistics, radiation ecology, toxic substances in the environment, and entrepreneurial activities desired.

Qualified candidates send résumés to:



**EG&G Energy Measurements, Inc.**  
Attention: Technical Recruiting  
130 Robin Hill Road  
Goleta, California 93117

U.S. citizenship required.  
*An Equal Opportunity Employer.*

## Tissue Culture Production Laboratory Director

Aggressive, fast moving biotechnology company seeks experienced laboratory director with extensive background in mammalian cell culture, scale-up technologies, analytical assays and protein purification, to manage corporate R & D laboratories. A demonstration of expertise in immunology (e.g. monoclonal antibodies) and a good basic knowledge of genetic bioengineering as related to transfected mammalian cells would be specifically valuable. Join an entrepreneurial interdisciplinary group of highly motivated professionals pioneering the development of hollow fiber production technology in cellular engineering and the development of human health pharmaceuticals.

Send curriculum vitae to:  
Micheal L. Gruenberg  
Executive Vice President — R & D  
Endotronics, Inc.  
8500 Evergreen Blvd.  
Minneapolis, MN 55433



**endotronics**  
Pioneering Cellular Engineering

## Toxicological/Carcinogenesis Research

The Division of Biological and Medical Research at Argonne National Laboratory has a staff position and 2 postdoctoral appointments available. The Laboratory is operated by the University of Chicago.

Research will be focused in one or more of the following: *in vivo* and *in vitro* approaches in the measurement of tumorigenesis, cellular mutagenesis, metabolism and fate of carcinogens and related chemicals, and other cellular and molecular events. Overall research aim: understanding the toxicologic effects of exposure to multiple chemicals, and identifying molecular markers indicative of toxicological effects.

Applicants should have Ph.D. in pharmacology, toxicology, biochemistry or related field, and training and experience in chemical carcinogenesis. Postdoctoral applicants must have received their degrees within 3 years of appointment; staff candidate should have some experience using mammalian cell culture systems.

Salary will be commensurate and competitive. Please send curriculum vitae with names of 3 references to:



Ms. Rosalie L. Bottino  
Box-D-BIM-24918-55  
Argonne National Laboratory  
9700 South Cass Avenue  
Argonne, IL 60439

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Affirmative Action Employer



## Post-Doctoral Training in Molecular and Cell Biology

Post-doctoral fellowships are available for training in various areas of cancer research including cell differentiation, chemical carcinogenesis, membrane biochemistry, genetics and immunology.

A strong background in molecular biology, virology, biochemical genetics and/or protein chemistry is required.

Applicants are requested to send curriculum vitae and the names of three references to:

Dr. Giovanni Rovera  
Coordinator of Research Training

THE WISTAR INSTITUTE  
OF ANATOMY AND BIOLOGY  
36th & Spruce Streets  
Philadelphia, PA 19104

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## Research Scientist Biochemical Pharmacology

Vital role leading inflammation  
investigation

Wyeth, one of the most respected and trusted names in pharmaceutical research, is intensifying its R&D efforts. Discover the creatively free, idea-rich environment which has fostered professional recognition and top-notch achievement.

You will design and execute diverse research projects through a team of four subordinate biologists. We look to you to lead our pharmacological studies in inflammation using animal models, keeping abreast of trends through meeting attendance and promoting innovation by publishing scientific findings.

Knowledge of arachidonic acid metabolism, particularly eicosanoid synthesis, must be coupled to a PhD in Biochemical Pharmacology with at least five years post-doctoral experience, including supervisory responsibility. You must also possess a record of success in pre-clinical drug discovery and the full range of research techniques from RIA and enzyme kinetics to HPLC.

Explore the exceptional advantages of research at Wyeth from excellent salary and benefits to the distinctive environment of our 20-acre Corporate campus in Radnor, PA, on Philadelphia's prestigious suburban Main Line. Direct your CV and salary history in confidence to: **Position #WD5111-C, Recruitment Manager, Wyeth Laboratories, Inc., P.O. Box 8299, Philadelphia, PA 19101.** An Equal Opportunity Employer. M/F/H/V responses encouraged.

**Wyeth Laboratories, Inc.**



TM

## POSITIONS OPEN

### TOXICOLOGIST/PHARMACOLOGIST

The Department of Pharmacology at Boston University School of Medicine has an opening for an assistant professor in toxicology/pharmacology starting July–September 1986. Candidates must have a doctorate in pharmacology or related discipline, strong research credentials, and 2 years of postdoctoral experience. In addition, the candidate must have a commitment to teaching medical and graduate students. Send complete curriculum vitae, including a brief statement of research interests, two or three representative reprints, and the names of individuals who may be contacted as references to: **Conan Kornetsky, Ph.D., Search Committee Chairman, Boston University School of Medicine, 80 East Concord Street, Boston, MA 02118.** Applications received after 15 February 1986 will not be considered. *An Equal Opportunity/Affirmative Action Employer.*

**VIROLOGIST.** Rapidly growing medical diagnostic manufacturer needs a highly motivated individual to develop rapid viral diagnostic antigen and antibody assays. Requires a Ph.D. in virology, with experience in immunoassay development preferred. Qualified individuals may submit résumés and salary requirements to: **Mr. J. Holland, Meridian Diagnostics, Inc., 3471 River Hills Drive, Cincinnati, Ohio 45244.**

### VIROLOGIST

Research Associate/Postdoctoral Fellowship position is available to participate in multidisciplinary study of AIDS-related dementia and HTLV-III infection of the central nervous system. Studies will focus on the pathogenesis of HTLV-III infection of neural cells in vivo and in cell culture using both classical virological and molecular techniques to define viral replication, viral gene expression, and altered cell function. Please send curriculum vitae and bibliography, along with the names of three references, to: **Richard W. Price, M.D., Department of Neurology, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.** *Equal Opportunity Employer, M/F/H.*

## CALL FOR PAPERS

### CALL FOR PAPERS SIXTH INTERNATIONAL OCEAN DISPOSAL SYMPOSIUM

21 to 25 April 1986  
Asilomar Conference Center  
Pacific Grove, California

The symposium will focus on:

- Persistent plastics, fish nets, and their effects
- Effects of contaminants on fisheries
- Marine pollution in island countries
- Developments in international conventions

Send a 200- to 300-word abstract by 10 February 1986 to:

**Dr. Iver W. Duedall**  
Organizing Committee Chairman  
Department of Oceanography and  
Ocean Engineering  
Florida Institute of Technology  
150 West University Boulevard  
Melbourne, FL 32901

## ASSISTANTSHIPS

### ASSISTANTSHIPS

**MEDICAL SCIENTIST TRAINING PROGRAM** offers assistantships for a select number of individuals for an integrated program in basic and clinical medical science leading to a combined M.D./Ph.D. degree in 6 to 7 years. Contact: **Director, Medical Scientist Training Program, College of Graduate Studies, Medical University of South Carolina, Charleston, South Carolina 29425.**

**ASSISTANTSHIPS IN ENVIRONMENTAL PLANNING.** Graduate research and teaching assistantships are available in environmental planning within the Urban and Regional Planning Department. Individuals with a sound ecology/environmental science background interested in water resources planning, database management, or other environmental landuse issues should send inquiry to: **Dr. Lewis L. Osborne, Department of Urban and Regional Planning, 1003 West Nevada Street, University of Illinois, Urbana, IL 61801.** *Affirmative Action/Equal Opportunity Employer.*

## ASSISTANTSHIPS

**PREDOCTORAL RESEARCH ASSISTANTSHIP** to work in an ongoing research project on movement initiation and basal ganglia functions. Ph.D. interest must be in the area of neurochemical mechanisms for controlling movement: CNS reaction time components, reflex behaviors, high-affinity agonist receptor states, and fast-kinetics of catecholamine release. Contact: **Dr. Richard E. Wilcox, Department of Pharmacology, The University of Texas, Austin, TX 78712; telephone: 512-471-5199.** *The University of Texas is an Equal Opportunity/Affirmative Action Employer.*

## SYMPOSIUM

### HOW TO MAKE MICROCAPSULES— A HANDS ON COURSE

A 3-day laboratory course designed to teach the art and science of microcapsule making. Suitable for biologists, pharmacists, chemists, life scientists, and engineers. Enrollment limited to 12. Lectures and laboratory sessions by: **Dr. Curt Thies, Professor of Chemical Engineering at Washington University in St. Louis.** Spring session: 19 to 21 March and 9 to 11 April 1986. For information, telephone: 314-889-6066.

## DOCTORAL PROGRAM

**DOCTORAL PROGRAM IN MOLECULAR AND CELLULAR BIOLOGY AND PATHOBIOLOGY.** Interdisciplinary program leading to Ph.D. degree seeks qualified candidates interested in fundamental molecular and cellular biology and its application to disease. Assistantships of \$9000 are available on a competitive basis. Contact: **Director, MCBP Program, College of Graduate Studies, Medical University of South Carolina, Charleston, South Carolina 29425.**

**COLLEGE OF GRADUATE STUDIES, MEDICAL UNIVERSITY OF SOUTH CAROLINA,** offers programs leading to Ph.D. and M.D./Ph.D. degrees in anatomy, biochemistry, biometry, basic and clinical immunology and microbiology, molecular and cellular biology and pathobiology, pathology, pharmaceutical sciences, pharmacology, and physiology; \$9000 assistantships available to highly qualified students. Contact: **Dean, College of Graduate Studies, Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425.**

## GRADUATE STUDY

**GRADUATE TRAINING PROGRAM IN NEUROSCIENCE**—The Neuroscience Program at The Milton S. Hershey Medical Center of The Pennsylvania State University has assistantships available in September 1986. This interdepartmental program is designed to confer a Ph.D. degree with a major in neuroscience after 4 years of study. A master's degree program is also available. Participating faculty have established research programs in molecular biology of the nervous system, electrophysiology, neuroendocrinology, neuropsychology, neuropharmacology, and cerebral metabolism. Interested candidates are invited to apply to: **Dr. Robert Page, Chairman, Neuroscience Program, The Milton S. Hershey Medical Center, The Pennsylvania State University, P.O. Box 850, Hershey, PA 17033.** *An Equal Opportunity/Affirmative Action Employer.*

### GRADUATE STUDY IN ENVIRONMENTAL HEALTH AND PLANNING

Coursework and research opportunities are offered in analytical laboratories conducting research in water quality and environmental microbiology, air pollution monitoring and health assessment, and elemental baseline biogeochemistry leading to the M.A. and Ph.D. degrees in social ecology, an internationally-recognized interdisciplinary program which includes scientists and specialists in public health, planning, and environmental law. For further information: **Jan Martin, Program in Social Ecology, University of California, Irvine, CA 92717.** *Equal Opportunity/Affirmative Action Employer.*

## CONFERENCE

**The National Institute of Mental Health (NIMH) and The New York Academy of Sciences**

### Conference on: PERSPECTIVES IN BIOLOGICAL DYNAMICS AND THEORETICAL MEDICINE

9 to 11 April 1986

Masur Auditorium, NIH, Bethesda, Maryland

This conference will seek to foster the influence of dynamical perspectives on clinically relevant basic research strategies and data interpretation models by bringing together, in a forum designed for heuristic interactions, biologically sophisticated mathematical theorists, theoretical physicists, modern statistical physicists, neuroscientists, and other basic and clinical scientists. Presentations will highlight applications in the dynamics of complex interactive systems to research on the brain, immune system, cardiovascular system, and psychiatric syndromes.

The conference will feature a limited number of poster presentations. Abstracts for these presentations should include: the name of the author(s), institutions represented, and a 200-word summary of the work to be presented. The deadline for the submission of abstracts is 1 February 1986. Abstracts should be sent to the conference co-chairman: **Dr. Stephen H. Koslow, Neurosciences Research Branch, NIMH, 5600 Fishers Lane, Rockville, MD 20857.**

For conference program and registration information, write to: **Conference Department, The New York Academy of Sciences, 2 East 63 Street, New York, NY 10021.**

**THIRD INTERNATIONAL CONFERENCE ON THINKING,** 4 to 8 January 1987, Honolulu, Hawaii. Focus will be on thinking across cultures, with special sessions on literacy and cognition, artificial intelligence, animal cognition, and hemispheric specialization. Key-note speakers include: **J. Galtung, M. Gazzaniga, D. Griffin, and M. Minsky.** For further information, write: **Conference on Thinking, Social Science Research Institute, 2424 Maile Way, Honolulu, Hawaii 96822.** Telephone: 808-948-8930.

## MEETINGS

**1986 HISTORICAL SOCIETY MEETING.** Joint Meeting of the American and Japanese Histochemical Society will be held on 9 to 13 June 1986, at the Seven Hills Conference Center, San Francisco State University, San Francisco, California. Vector Young Investigator Awards for travel expenses. Ralph D. Lillie Award for outstanding presentation by a student. **Deadline for abstracts: 28 February 1986.** Forms in December 1985 issue *Journal of Histochemistry and Cytochemistry*: **Dr. E. W. Gresik, Program Chairman, Department of Anatomy, Mount Sinai School of Medicine, 5th Avenue and 100th Street, New York, NY 10029.** The Histochemical Society welcomes new members. Membership forms: **Dr. C. Oliver, Laboratory of Oral Biology/Physiology, Building 30, Room 211, National Institute of Dental Research, National Institutes of Health, Bethesda, Maryland 20205.**

## TRAINING PROGRAM

**TRAINING PROGRAM:** Environmental Impact on Lung Structure and Function. Applications are invited for pre- and postdoctoral NIH traineeships dealing with environmental effects on lung at the molecular and cellular levels and on the lung as an organ of immunological defense. Interdepartmental basic sciences program in the School of Medicine at State University of New York, Stony Brook, and biology or experimental medicine at Brookhaven National Laboratory. Predoctoral studies begin August 1986 and lead to Ph.D. in basic medical sciences. Postdoctoral positions for M.D.'s and Ph.D.'s available immediately and also on 1 July 1986. Stipends and benefits according to recently upgraded NIH and university guidelines. Postdoctoral appointments limited to U.S. citizens and those holding permanent visas. Postdoctorals should respond with curriculum vitae, three letters of reference, and major research interest to: **Aaron Janoff, Ph.D., Program Director, Department of Pathology, SUNY, Stony Brook, Stony Brook, NY 11794.** Predoctoral applicants contact: **G. Habicht, Ph.D., at the same address for forms and information.** *SUNY, Stony Brook, is an Affirmative Action/Equal Opportunity Educator and Employer.* AK Number 347-85.



DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Public Health Service  
Food and Drug Administration  
Center for Food Safety and Applied Nutrition

### **NUTRITION/TOXICOLOGY RESEARCH**

The Food and Drug Administration is seeking Staff Fellow applicants to conduct toxicological research on risk assessment, potential constituents of foods, or the effects of processing on food components.

Candidates must have a Ph.D. or have been certified by a university as meeting all requirements leading to such a doctorate in one of the following disciplines: Nutrition, Toxicology, Biochemistry, Biology, Pharmacology or closely related disciplines with emphasis in small animal toxicological testing. Candidates must not have more than seven years of research at the professional level and must be United States citizens or eligible for naturalization within four years.

The Staff Fellowship is an excepted appointment in the Federal Service. Initial appointments will be for a minimum 2 years. Salary (\$26,381 to \$40,105) is based on qualifications. A current curriculum vitae and bibliography are to be sent to W. Gary Flamm, Ph.D., Director, Office of Toxicological Sciences (HFF-100), 200 C Street, SW, Washington, DC 20204, not later than January 31, 1986.

\* \* \* \* \*

### **MICROBIOLOGICAL RESEARCH**

The Food and Drug Administration is seeking Staff Fellow applicants to conduct research on the construction of probes for detecting pathogenic bacteria in food using DNA hybridization. A strong microbial genetics/molecular biology background and experience with synthetic oligonucleotides and/or bacterial virulence assays is desirable.

Candidates must have a Ph.D. or have been certified by a university as meeting all requirements leading to such a doctorate in one of the following disciplines: Microbiology, Molecular Biology, Genetics or closely related disciplines with emphasis on food microbiology and food safety. Candidates must not have more than seven years of research at the professional level and must be United States citizens or eligible for naturalization within four years.

The Staff Fellowship is an excepted appointment in the Federal Service. Initial appointments will be for a minimum 2 years. Salary (\$26,381 to \$40,105) is based on qualifications. A current curriculum vitae and bibliography are to be sent to Walter E. Hill, Ph.D., Division of Microbiology (HFF-234), 200 C Street, SW, Washington, DC 20204, not later than January 31, 1986.

THE FOOD AND DRUG ADMINISTRATION IS AN  
EQUAL OPPORTUNITY EMPLOYER.

## **Research & Development Opportunities**



American Dade - a leader in the field of clinical laboratory medicine, as well as an innovator in state-of-the-art technology, provides a variety of support to the health care industry. We've made recent significant technological advancement with the development and introduction of The Stratus Immunoassay System — a rapid, high sensitivity, automated enzyme immunoassay system that can perform any immunoassay procedure.

As our health care system undergoes significant changes, the keystone of American's strategy is in our ability to serve hospitals, laboratories, and medical specialists cost effectively with an emphasis on quality.

### **R&D Group Leader**

Manage a group of scientists in the completion of projects involving the development of immunoassays utilizing a novel automated immunoassay technology. Selected candidate must possess the technical and administrative skills to bring projects to conclusion on time and on budget.

This position requires a PhD in a chemical or biological science with post-doctoral experience. Emphasis in immunochemistry or biochemistry. Experience in protein purification/characterization and immunoassay development preferred.

### **Organic Chemists/Biochemists**

At the Senior Research Scientist level, these positions require experience in synthetic organic chemistry and biochemistry of proteins. Responsibilities include hapten derivitization and protein coupling. PhD with 2-3 years academic or industrial experience preferred.

### **Associate Research Scientists & Production Chemists**

BS or MS in Chemistry or Biochemistry required for project work in the development of immunoassays and preparation of labeled enzymes. Laboratory or industrial research experience highly desired.

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## TRAINEESHIPS

THE UNIVERSITY OF MICHIGAN offers **TRAINEESHIPS** (stipend plus full tuition) for study toward the Ph.D. in **TOXICOLOGY**. Students with distinguished records of achievement in physical and/or biological sciences are invited to apply to: **Professor I. A. Bernstein, Director, Toxicology Program, 1620 Victor Vaughan Building, The University of Michigan, Ann Arbor, MI 48109; telephone: 313-764-5410.**

## REQUEST FOR PROPOSALS

### ACID PRECIPITATION MEETING

The U.S. Department of Agriculture (USDA) Forest Service and the Environmental Protection Agency will issue a request for proposals in March 1986 for research on the effects of air pollutants and acid deposition on eastern hardwood species. Additionally, biological, physical, socioeconomic, and political factors will be identified that influence research planning for potential effects of these pollutants on eastern hardwoods. Send written inquiries to: **USDA Forest Service, Room 308 (ASDPL), 370 Reed Road, Broomall, Pennsylvania 19008.**

## FELLOWSHIPS

**POSTDOCTORAL FELLOWSHIP—NEUROTRANSMITTER RECEPTORS** available Spring 1986 to study the functional responses (channel opening and desensitization) of receptors and their modulation and the molecular mechanisms of neurotransmitter-receptor interactions using ion flux methods including quench flow and stopped flow. Projects include the study of GABA receptor, glutamate receptor, and acetylcholine receptor. The position will be in the Department of Biochemistry, University of Missouri—Columbia. Write: **Dr. Derek J. Cash, Neurochemistry Research Unit, Department of Biochemistry, University of Missouri—Columbia School of Medicine, 5400 Arsenal Street, St. Louis, MO 63139. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL FELLOWSHIP IN HUMAN MOLECULAR GENETICS**—Available immediately or July 1986 to study human gene structure and expression. Faculty studies include cloning, expression, and gene probe analyses of human and animal genes for lysosomal and heme biosynthetic enzymes and coagulation factors, as well as studies of oncogenes and carcinogenesis. Experience with protein purification and/or DNA techniques preferred. Send curriculum vitae, bibliography, research interests, and names of two references to: **R. J. Desnick, Ph.D., M.D., Director of Medical Genetics, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029. An Equal Opportunity Employer.**

### UNIVERSITY OF CALIFORNIA, SAN FRANCISCO POSTDOCTORAL FELLOWSHIPS IN MOLECULAR GENETICS AND CELL BIOLOGY

Fellowships are available for research on the molecular, cellular, genetic, and developmental aspects of mammalian cells. The faculty include: **M. J. Banda** (angiogenesis, wound healing, and macrophage proteinase), **J. E. Cleaver** (DNA repair genes), **W. F. Morgan** (sister chromatid exchange), **J. P. Murnane** (DNA recombination), **R. B. Painter** (DNA replication and repair), **R. Pederson** (early mammalian development), **M. R. Wabl** (molecular immunology), **Z. Werb** (macrophages, extracellular matrix degradation), and **S. Wolff** (radiation genetics, cytogenetics).

Stipends are funded through a National Research Service training program in carcinogenesis and mutagenesis sponsored by NIEHS. Appointments can begin immediately. The requirements are U.S. citizenship or permanent residency, and a Ph.D. degree or equivalent. Send résumé, graduate transcript, statement of research interests, and three letters of recommendation before 1 February 1986 to: **W. F. Morgan, Acting Program Director, Laboratory of Radiobiology and Environmental Health, LR-102, University of California, San Francisco, CA 94143. An Equal Opportunity/Affirmative Action Employer.**

## FELLOWSHIPS

**POSTDOCTORAL FELLOWSHIP** in molecular/biochemical parasitology to participate in ongoing studies of molecular biology of *Toxoplasma gondii*. Recent Ph.D. with training in either eukaryotic gene cloning or protein chemistry. Available 1 April for up to 3 years. Send curriculum vitae and three references to: **J. S. Remington, M.D., Chairman, Department of Immunology and Infectious Diseases, Research Institute, Palo Alto Medical Foundation, 860 Bryant Street, Palo Alto, CA 94301.**

### BIOLOGY EDUCATION

#### DOCTORAL FELLOWSHIPS FOR 1986–1987

Unique doctoral program in biology education designed to meet individual needs and to foster discipline and science education competencies. Fellowships available for 1986–1987 academic year and renewable for two additional years. **Dr. Thomas R. Mertens, Director of Doctoral Programs, Department of Biology, Ball State University, Muncie, IN 47306.**

### FELLOWSHIPS ANNOUNCEMENT

**NEUROBEHAVIORAL FELLOWSHIP** (September 1986 to August 1988). The Department of Neurology, University of Wisconsin Medical School, Milwaukee Clinical Campus, wishes to announce an opening in a 2-year, postdoctoral fellowship program in clinical neurophysiology. Requirements: APA-accredited internship and Ph.D. in clinical psychology; coursework in neuropsychology. For details, write to: **Kerry Hamsher, Ph.D., Mount Sinai Medical Center, 950 North 12 Street, Milwaukee, WI 53201–0342. Application deadline: 31 March 1986. An Equal Opportunity Employer.**

**POSTDOCTORAL FELLOWSHIP IN CLINICAL BIOCHEMISTRY.** Position available in the Department of Pathology involving both applied clinical problems and basic research. The candidate could elect to develop nonisotopic DNA probe assays for viral detection or to participate in the study of hormone regulation of gene expression in cultured human hepatocytes. Candidates should have a Ph.D. degree in biochemistry, molecular biology, or a closely related discipline. Starting date negotiable; firm funding for up to 2 years. Please send an outline of professional goals, curriculum vitae, and names of three references to: **G. J. Buffone, Ph.D., Associate Professor, Baylor College of Medicine and Texas Children's Hospital, Department of Pathology, P.O. Box 20269, Houston, TX 77030.**

**POSTDOCTORAL FELLOWSHIP IN MARINE SCIENCES** at University of Georgia, Athens, Georgia, anticipated 1 July 1986 to 30 June 1987; salary: \$22,000. Possibility of second year, depending on funding. For list of faculty and fields of activity, write to: **Marine Sciences, University of Georgia, Ecology Building, Athens, GA 30602, by 15 February 1986. The University of Georgia is an Equal Opportunity/Affirmative Action Institution—women and minority candidates are especially encouraged to apply.**

### POSTDOCTORAL FELLOWSHIP IN CELL AND MOLECULAR BIOLOGY

Postdoctoral position to study the molecular basis of cell differentiation. Approaches include immunochemistry, eukaryotic cell transfection, establishment of temperature-sensitive cell lines, and various cellular and molecular biological techniques. Experience in molecular biology including recombinant DNA techniques preferred. Send curriculum vitae and names of three references to:

**Frank E. Stockdale, M.D., Ph.D.  
Stanford School of Medicine, M-211  
Stanford, CA 94305**

### POSTDOCTORAL FELLOWSHIPS— PEDIATRIC INFECTIOUS DISEASE,

sponsored by the NIH. Investigations on natural history of herpesviruses in man, perinatal infections, antiviral studies, pneumococcal and group B streptococcal studies, diagnostic virology, immunogenetics, and basic virology available. Training geared for academic career. Degrees required: M.D. with pediatric subspecialty or Ph.D. Positions available immediately through June 1986. Send curriculum vitae to: **Charles Alford, M.D., Department of Pediatrics, University of Alabama at Birmingham, Medical Center, University Station, Birmingham, Alabama 35294; telephone: 205-934-2441.**

## FELLOWSHIPS

**POSTDOCTORAL FELLOWSHIPS** in the Neurochemistry Unit, Department of Biochemistry, University of Missouri—Columbia and Missouri Institute of Psychiatry to study: Interrelationship between LSD and serotonin receptor; receptor-mediated second messenger production; and regulation of isoprenoids (dolichol, cholesterol, isopentenyl adenine) biosynthesis in cultured neural cells. These fellowships are located in Columbia and are for 2 or 3 years. The Neurochemistry Unit is part of the Biochemistry Department, School of Medicine, University of Missouri—Columbia. Please send curriculum vitae, area of interest, and three references to: **Dr. Ingming Jeng, Unit Chief, Neurochemistry Unit, MIP, 5400 Arsenal Street, St. Louis, MO 63139–1494. Equal Opportunity/Affirmative Action Employer.**

### FELLOWSHIPS FOR RESEARCH AND TRAINING IN ECOLOGY UNIVERSITY OF MICHIGAN BIOLOGICAL STATION 17 June to 17 August 1986

Advanced undergraduate or graduate students and researchers with a Ph.D. may apply for fellowships in the Naturalist-Ecologist Training Program at the Biological Station in northern Michigan. All participants conduct independent ecological studies. Students enroll in one course of their choice and in another, Methods of Ecological Research. The latter emphasizes through hands-on experience the fundamentals of experimental design, data management, statistical analyses, and communication of findings. Researchers concentrate on field-based studies, but must be willing to advise and interact with students in the program. Awards for students cover tuition for both courses (ten graduate credits), fees, room, and board. Researchers receive a stipend, funds for equipment or supplies, fees, room and board, and an allowance for up to two dependents. For details and an application form, contact: **Dr. Mary J. Whitmore, University of Michigan Biological Station, Pellston, MI 49769. Applications must be received by 28 February 1986.**

The Neurosciences Program of the University of Alabama at Birmingham, School of Medicine, announces the availability of three **POSTDOCTORAL FELLOWSHIPS** in the field of **MEDICAL NEUROBIOLOGY**. This training program provides opportunity for the successful applicants to expand their research experience in one or more of several medical neuroscience areas, including epilepsy, major psychoses, neuromuscular disease, multiple sclerosis, dementias, movement disorders, and stroke. Well-equipped laboratories are available for research at the molecular, cellular, or whole animal level. Salary support will be at the NIH scale. Interested individuals with a commitment to a career in medical neuroscience research are encouraged to apply prior to the deadline of 15 January 1986, by forwarding curriculum vitae, indication of research interest, and three letters of reference to: **Dr. George B. Brown, The Neurosciences Program, University of Alabama at Birmingham, School of Medicine, University Station, Birmingham, AL 35294. An Affirmative Action/Equal Opportunity Employer**

### DOGGETT PREDOCTORAL FELLOWSHIP

The University of Tennessee, Memphis, Graduate School of Medical Sciences, announces the opening of competition for a full support predoctoral fellowship for study beginning in the summer or fall 1986. An annual stipend of \$8500, plus tuition, renewable annually for 4 years, is included. An outstanding academic record with at least a baccalaureate degree in an appropriate field is required. Selection will be based on demonstrated achievement and future promise, rather than financial need.

Fields of study include: anatomy, biochemistry, microbiology and immunology, pathology, pharmacology, physiology and biophysics, and toxicology.

Completed applications, transcripts of all previous college and university work, three letters of reference, scores from the Graduate Record Examination (verbal and quantitative), and from the TOEFL exam (if a foreign student) must be received by 1 February 1986.

*Nondiscriminatory as to race, color, national origin, sex, religion, age, handicap, or veteran status.* For details and application materials write:

**Dr. Bob A. Freeman,  
Vice Chancellor for Academic Affairs  
University of Tennessee, Memphis  
Memphis, Tennessee 38163**

## RESEARCH OPPORTUNITIES

Bionetics Research, Inc. is expanding its Cell Biology Laboratory. As a result, we are seeking experienced PhD-level individuals for the following positions. (Postdoctoral Fellows and experienced Research Assistants will also be considered.)

- **Scientist I (Animal Model Systems)** — Develop animal model systems to evaluate potential human vaccines for pathogens and anti-cancer purposes using small laboratory animals and non-human primates. DVM or PhD in Animal Physiology or Immunology with strong interest in in-vivo systems and experience in virus handling.
- **Scientist I (Virology)** — Perform purification and characterization viruses of retrovirus group and develop viral assays. PhD in Virology, Immunology or Molecular Biology with several years experience in infectious disease research techniques.

Bionetics Research, Inc., located in suburban Washington, DC, offers an attractive compensation package including medical/life/dental insurance, 401(k) retirement and savings. Please send curriculum vitae including salary requirements in confidence to:

Personnel Position "M"  
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BIONETICS RESEARCH, INC.

## NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH AND HUMAN SERVICES

The National Institute on Aging (NIA) invites nominations and applications for the position of Associate Director, Epidemiology, Demography, and Biometry Program (EDBP). This is a Civil Service position in the Senior Executive Service with a salary range of \$61,296 to \$68,700 per annum. The person selected may be eligible for Physician's Comparability pay up to \$10,000 per year. A one-year probationary period must be served by the individual selected if not currently in the Senior Executive Service.

The Associate Director, EDBP, provides technical and administrative direction and leadership to the Institute's research program in epidemiology, demography, and biometry; and serves as the focal point within the Federal sector, the scientific community, and the public for these activities.

Candidates must meet the minimum educational requirements for Medical Officer, GS-602, Epidemiologist, GS-601, of Statistician, GS-1530 (or equivalent combination of experience and training), as defined by the U.S. Office of Personnel Management Handbook X-118, Qualification Standards for Positions under the General Schedule, which is available in Federal Personnel Offices and Federal Job Information Centers.

Further information about the position and qualifications requirements may be obtained by contacting Mr. Michael P. Lockard at 301-496-5347. A Personal Qualifications Statement (SF-171), accompanied by a current curriculum vitae and bibliography, should be submitted to: NIA Personnel, Building 31, Room 2B-63, National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland 20892.

APPLICATION MUST BE POSTMARKED NO LATER THAN  
JANUARY 31, 1986.

ALL QUALIFIED CANDIDATES WILL RECEIVE CONSIDERATION WITHOUT REGARD TO RACE, RELIGION, COLOR, SEX, AGE, NATIONAL ORIGIN, LAWFUL POLITICAL AFFILIATION, MARITAL STATUS, UNION MEMBERSHIP, OR ANY NONDISQUALIFYING PHYSICAL OR MENTAL HANDICAP.

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## ASTRA

### Career opportunities in India for Molecular Biologists, Cell Biologists, Recombinant DNA Biochemists, Molecular Geneticists, and Immunologists.

ASTRA RESEARCH AND DEVELOPMENT CENTRE in Bangalore, India is fully funded by AB ASTRA, SWEDEN, an international pharmaceutical company with strong commitment to research. The objectives of the research centre in Bangalore, India are to develop products for diagnoses and therapy for tropical diseases through the application of recombinant DNA technology.

The Centre is seeking applications from scientists of Indian origin with expertise in recombinant DNA technology for several research positions.

Applications enclosing detailed resumé may be sent to:

Professor J Ramachandran, Genentech, Inc, 460 Point San Bruno Boulevard, South San Francisco, Calif 94080, USA

or

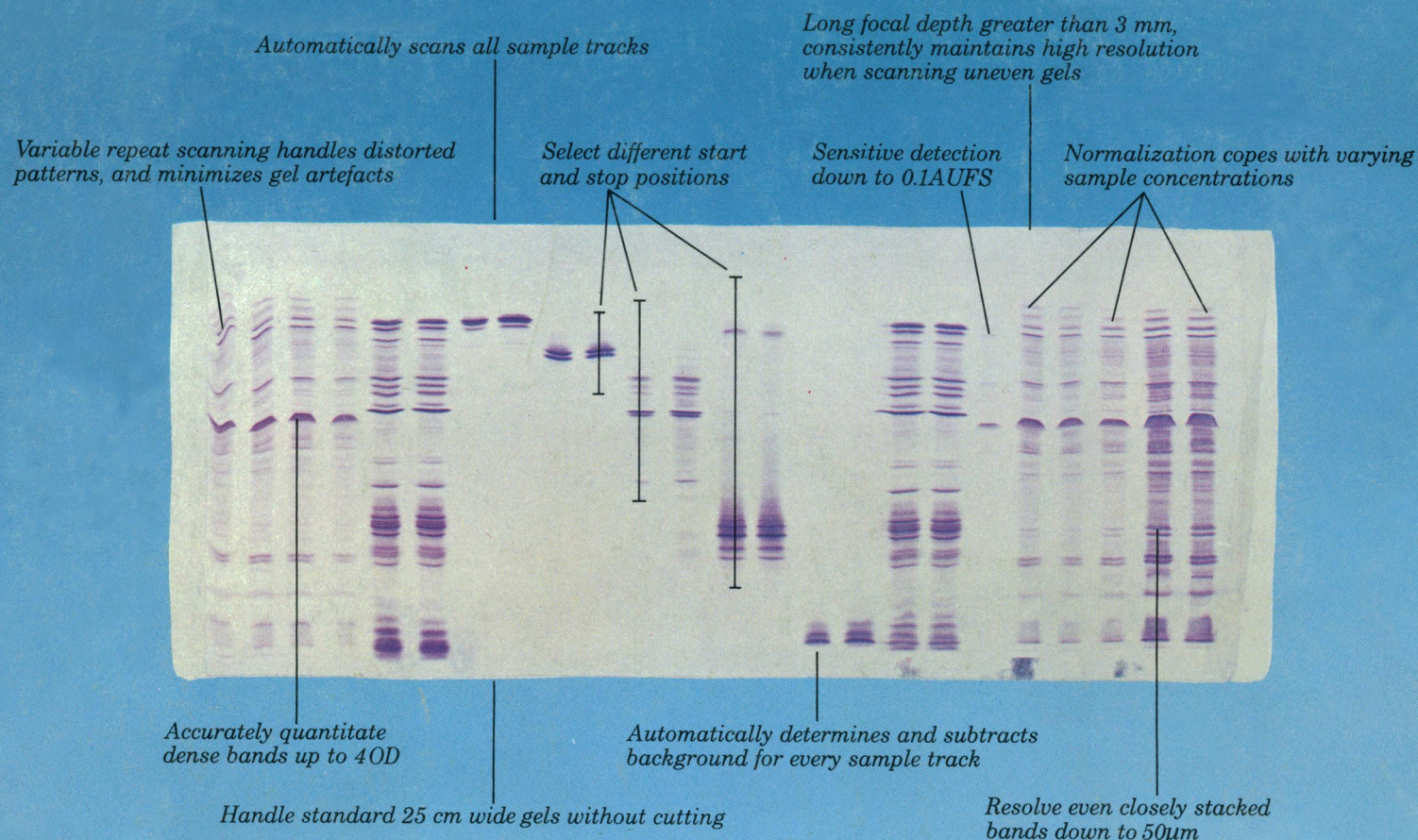
Professor S Ramaseshan, Raman Research Institute, Bangalore 560 012, India

**RESEARCH DIRECTOR:** The candidate should be an experienced scientist with proven abilities to lead and stimulate fellow scientists. Responsibilities include management, long range planning, coordination of research projects and interaction with corporate sponsors.

**RESEARCH SCIENTISTS:** Candidates should have 5-10 yrs of post doctoral research experience in one of the areas of biomedical research mentioned above with emphasis on cDNA cloning and expression in procaryotic and/or eucaryotic systems.

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