

papers are organized in three sections, Diagenetic Processes, Early Diagenesis, and Regional Studies and Burial Diagenesis. The sedimentary rocks covered include sandstones (six papers), cherts (two papers), dolomites (three papers), phosphates (one paper), magnesite (one paper), and limestones (ten papers). Most of the authors are from the United Kingdom, with a sprinkling from Norway, Spain, Canada, the United States, and China. Almost all the studies represent case histories from various geographic areas, mostly in the United Kingdom. Hence a valuable new set of data has become available.

In the section on early diagenesis a paper by Pueyo and Urpinell describing the discovery of magnesite in modern playa lakes of Spain was of particular interest to me. Although in recent years magnesite (MgCO_3) has been found in undeformed carbonate strata of the rock record, this may be the first observation of this mineral in a modern continental environment. The authors explain magnesite formation as a result of both an increase in CO_2 activity caused by the decay of organic matter and the formation of strong concentrations of magnesium in brines in summer. Yet playas that have been studied in West Texas, New Mexico, and the Middle East experienced similar CO_2 increase and magnesium concentrations. Was magnesite in these playas missed in sampling, or was it indeed absent? In my own playa studies dolomite ($\text{CaMg}[\text{CO}_3]_2$) was the observed magnesian mineral and magnesite was never present. In these playas dolomite formed as a evaporite mineral. This observation relates to the next paper, by Taberner and Santisteban, whose title, "Mixed-water dolomitization . . .," invokes a popular explanation for dolomitization. Not only has the concept of mixing marine and freshwater to precipitate dolomite been overstated, much of the evidence is equivocal or negative. Could not hypersalinity explain the origin of such dolomite? After all, following the inflow of marine waters brines are generated. In the section on regional studies and burial diagenesis Boles explains the diagenetic history of a large petroleum reservoir in which the migration of 500 million barrels of oil closely followed or was contemporaneous with extensive dissolution of plagioclase and calcite from influx of acid during kerogen migration. In the section on diagenetic processes Goldsmith and King discuss hydrodynamic modeling of cementation patterns in modern reefs. Reef samples have shown that the variation in the volume and spatial distribution of precipitated cement is controlled by the microenvironmental permeability alone. Large pores initially receive a greater volume

of cement than smaller pores, and the rate of cementation is reduced as the pores become restricted.

Other subjects of interest include controls on the geometry and distribution of carbonate cements in sandstones, kinds of silicification fabrics, porosity development in sandstones, and phosphate cements. No paper discusses deep-burial diagenesis and its effect on cementation, porosity development, dolomitization, or changes in mineral phase.

I would have welcomed a synthesis of this mass of data, showing especially how it relates to existing knowledge. The introduction by Marshall encourages readers "to delve into the papers for themselves." For specialists this is good advice. However, the subject of diagenesis is now so central for academic and industrial researchers that a useful synthesis could have been an important contribution.

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Books Received

Comparative Perspectives in Modern Psychology. Daniel W. Leger, Ed. University of Nebraska Press, Lincoln, 1988. xvi, 327 pp. \$33.95; paper, \$18.95. Current Theory and Research in Motivation, vol. 35. From a symposium, Lincoln, NE, 1987. Six papers, dealing with monogamy, parental solicitude, animal intelligence, and vocal communication, including bird song and ape language.

Computers in Mathematical Research. N. M. Stephens and M. P. Thorne, Eds. Clarendon (Oxford University Press), New York, 1988. xii, 251 pp., illus. \$57.50. Institute of Mathematics and its Applications Conference Series, vol. 14. From a conference, Cardiff, Wales, Sept. 1986.

Control of Cell Proliferation and Differentiation during Regeneration. H. J. Anton, Ed. Karger, Basel, 1988. x, 246 pp., illus. \$147.50. Monographs in Developmental Biology, vol. 21. From a colloquium, Cologne, F.R.G., 1986.

Diffusion at Interface. Microscopic Concepts. M. Grunze, H. J. Kreuzer, and J. J. Weimer, Eds. Springer-Verlag, New York, 1988. viii, 205 pp., illus. \$59.50. Springer Series in Surface Sciences, vol. 12. From a workshop, Campobello Island, New Brunswick, Aug. 1987.

Downstream Processes. Equipment and Techniques. Avshalom Mizrahi, Ed. Liss, New York, 1988. xiv, 370 pp., illus. \$96. Advances in Biotechnological Processes, vol. 8.

Encyclopedia of Human Evolution and Prehistory. Ian Tattersall, Eric Delson, and John Van Couvering, Eds. Garland, New York, 1988. xxxvi, 603 pp., illus. \$87.50. Garland Reference Library of the Humanities, vol. 768.

Endothelial Cell Biology in Health and Disease. Nicolae Simionescu and Maya Simionescu, Eds. Plenum, New York, 1988. xx, 458 pp., illus. \$89.50.

Energy and Problems of a Technical Society. Jack J. Kraushaar and Robert A. Ristinen, 2nd ed. Wiley, New York, 1988. xii, 512 pp., illus. Paper, \$35.75.

Enriching Heredity. The Impact of the Environment on the Anatomy of the Brain. Marian Cleaves Diamond. Free Press (Macmillan), New York, 1988. xiv, 191 pp., illus. \$24.95.

Ethnographers in the Field. The Psychology of

Research John L. Wengle. University of Alabama Press, Tuscaloosa, 1988. xxiv, 197 pp. \$21.95.

The Evolution of the Calusa. A Nonagricultural Chiefdom on the Southwest Florida Coast. Randolph J. Widmer. University of Alabama Press, Tuscaloosa, 1988. xviii, 334 pp., illus. Paper, \$18.95.

Exercises in Physical Stratigraphy and Sedimentology. William J. Fritz and Johnnie N. Moore. Wiley, New York, 1988. x, 221 pp., illus. Paper, \$22.35.

Family Farming. A New Economic Vision. Marty Strange. University of Nebraska Press, Lincoln, and Institute for Food and Development Policy, San Francisco, CA, 1988. xii, 311 pp. \$18.95.

Flagellates in Freshwater Ecosystems. R. I. Jones and V. Ilmavirta, Eds. Kluwer, Norwell, MA, 1988. viii, 279 pp., illus. \$145. Developments in Hydrobiology, vol. 45. Based on a meeting, Lammi, Finland, June 1986. Reprinted from *Hydrobiologia*, vol. 161.

From Clocks to Chaos. The Rhythms of Life. Leon Glass and Michael C. Mackey. Princeton University Press, Princeton, NJ, 1988. xviii, 248 pp., illus. \$45; paper, \$13.95.

Generative Processes in Music. The Psychology of Performance, Improvisation, and Composition. John A. Sloboda, Ed. Clarendon (Oxford University Press), New York, 1988. xviii, 298 pp., illus. \$75.

Genetic Resources of Phaseolus Beans. Their Maintenance, Domestication, Evolution, and Utilization. Paul Gepts, Ed. Kluwer, Norwell, MA, 1988. xiv, 613 pp., illus. \$138.50. Current Plant Science and Biotechnology in Agriculture, vol. 6.

Ging's ohne Forschung Besser? Der Einfluss der Naturwissenschaften auf die Gesellschaft. Max F. Perutz. 2nd ed. Wissenschaftliche Verlagsgesellschaft, Stuttgart, 1988. 110 pp., illus. Paper, DM 16.50. Paperback der Zeitschrift Naturwissenschaftliche Rundschau.

Glim. An Introduction. M. J. R. Healy. Clarendon (Oxford University Press), New York, 1988. x, 130 pp., illus. \$39.95.

Global Climatic Catastrophes. M. I. Budyko, G. S. Golitsyn, and Y. A. Izrael. Springer-Verlag, New York, 1988. viii, 99 pp., illus. Paper, \$29. Translated from the Russian edition (Leningrad, 1986) by V. G. Yanuta.

Gravity's Lens. Views of the New Cosmology. Nathan Cohen. Wiley, New York, 1988. xviii, 237 pp., illus. \$19.95. Wiley Science Editions.

Green Photosynthetic Bacteria. J. M. Olsen et al., Eds. Plenum, New York, 1988. x, 327 pp., illus. \$69.50. Based on a workshop, Nyborg, Denmark, Aug. 1987.

Insulin Receptors. C. Ronald Kahn and Len C. Harrison, Eds. Liss, New York, 1988. Two volumes. Part A, Methods for the Study of Structure and Function. xiv, 304 pp., illus. \$96. Part B, Clinical Assessment, Biological Responses, and Comparison to the IGF-I Receptor. xiv, 220 pp., illus. \$70. Receptor Biochemistry and Methodology, vol. 12.

International Environmental Diplomacy. The Management and Resolution of Transfrontier Environmental Problems. John E. Carroll. Cambridge University Press, New York, 1988. viii, 291 pp. \$54.50.

International Mineral Economics. Mineral Exploration, Mine Valuation, Mineral Markets, International Mineral Policies. W. R. Gocht, H. Zantop, and R. G. Eggert. Springer-Verlag, New York, 1988. xiv, 271 pp., illus. Paper, \$39.50.

Introduction to Causal Analysis. Exploring Survey Data by Crosstabulation. Ottar Hellevik. 2nd ed. Norwegian University Press, Oslo, 1988 (U.S. distributor, Oxford University Press, New York). xx, 211 pp., illus. Paper, \$24.95.

Invention and Evolution. Design in Nature and Engineering. M. J. French. Cambridge University Press, New York, 1988. xvi, 324 pp., illus. \$59.50; paper, \$19.95.

Learning Strategies and Learning Styles. Ronald R. Schmeck, Ed. Plenum, New York, 1988. xxii, 368 pp. \$47.50. Perspectives on Individual Differences.

Lectins and Glycoconjugates in Oncology. H. J. Gabius and G. A. Nagel, Eds. Springer-Verlag, New York, 1988. x, 224 pp., illus. \$59.40.

The Living Tundra. Yu. I. Chernov. Cambridge University Press, New York, 1988. xiv, 213 pp., illus. Paper, \$17.95. Studies in Polar Research. Reprint, 1985 edition.

Messengers of Paradise. Opiates and the Brain. Charles F. Levinthal. Anchor (Doubleday), New York, 1988. x, 229 pp., illus. \$17.95. New York Academy of Sciences Book Project.

Metal Clusters in Proteins. Lawrence Que, Jr., Ed. American Chemical Society, Washington, DC, 1988. x, 413 pp., illus. \$84.95. ACS Symposium Series, vol. 372. From a symposium, New Orleans, LA, Aug.-Sept. 1987.

Models of Nature. Ecology, Conservation, and Cultural Revolution in Soviet Russia. Douglas R. Weiner. Indiana University Press, Bloomington, 1988. xvi, 312 pp. + plates. \$35. Indiana-Michigan Series in Russian and East European Studies.

Modulation of Synaptic Transmission and Plasticity in Nervous Systems. Georg Hertting and Hanns-Christof Spatz, Eds. Springer-Verlag, New York, 1988. x, 457 pp., illus. \$143.10. NATO Advanced Science Institute Series H, vol. 19. From a workshop, Castelvechio Pascoli, Italy, Sept. 1987.

Molecular Biology of Intracellular Protein Sorting and Organelle Assembly. Ralph A. Bradshaw, Lee McAlister-Henn, and Michael G. Douglas, Eds. Liss, New York, 1988. xvi, 224 pp., illus. \$80. UCLA Symposium on Molecular and Cellular Biology, vol. 76. From a symposium, Taos, NM, Jan.-Feb. 1987.

Monokines and Other Non-Lymphocytic Cytokines. Michael C. Powanda *et al.*, Eds. Liss, New York, 1988. xxx, 414 pp., illus. \$86. Progress in Leucocyte Biology, vol. 8. From a workshop, Hilton Head, SC, Dec. 1987.

Multiphoton Processes. S. J. Smith and P. L. Knight, Eds. Cambridge University Press, New York, 1988. x, 365 pp., illus. \$54.50. Cambridge Studies in Modern Optics, vol. 8. From a conference, Boulder, CO, July 1987.

The Na⁺,K⁺-Pump. Jens C. Skou *et al.*, Eds. Liss, New York, 1988. Two volumes. Part A, Molecular Aspects, xxxii, 665 pp., illus. Part B, Cellular Aspects, xxxii, 497 pp., illus. Each volume, \$115. Progress in Clinical and Biological Research, vol. 268. From a conference, Fuglsø, Denmark, June 1987.

The Nature of Creativity. Contemporary Psychological Perspectives. Robert J. Sternberg, Ed. Cambridge University Press, New York, 1988. x, 454 pp., illus. \$54.50; paper, \$19.95.

The Nature of the Common Law. Melvin Aron Eisenberg. Harvard University Press, Cambridge, MA, 1988. xii, 204 pp. \$22.50.

New Developments in Semiconductor Physics. G. Ferenczi and F. Beleznyay, Eds. Springer-Verlag, New York, 1988. vi, 301 pp., illus. \$35.80. Lecture Notes in

Physics, vol. 301. From a school, Szeged, Hungary, Aug.-Sept. 1987.

Pesticide Formulations. Innovations and Developments. Barrington Cross and Herbert B. Scher, Eds. American Chemical Society, Washington, DC, 1988. xii, 288 pp., illus. \$64.95. ACS Symposium Series, vol. 371. From a symposium, New Orleans, LA, Aug.-Sept. 1987.

Physiology and Toxicology of Male Reproduction. James C. Lamb IV and Paul M. D. Foster, Eds. Academic Press, San Diego, CA, 1988. xii, 270 pp., illus. \$75.

Phytochemicals in Plant Cell Cultures. Friedrich Constabel and Indra K. Vasil, Eds. Academic Press, San Diego, CA, 1988. xxviii, 618 pp., illus. \$110. Cell Culture and Somatic Cell Genetics of Plants, vol. 5.

Primate Phylogeny. F. E. Grine, J. G. Fleagle, and L. B. Martin, Eds. Academic Press, San Diego, CA, 1987. iv, 146 pp., illus. Paper, \$15.95. Reprinted from *Journal of Human Evolution*, vol. 16, no. 1 (1987). From a symposium, New York, Nov. 1986.

Professional and Popular Medicine in France, 1770-1830. The Social World of Medical Practice. Matthew Ramsey. Cambridge University Press, New York, 1988. xviii, 406 pp., illus. \$49.50. Cambridge History of Medicine.

Progress in Plant Protoplast Research. K. J. Puite *et al.*, Eds. Kluwer, Norwell, MA, 1988. xviii, 414 pp., illus. \$92.50. Current Plant Science and Biotechnology in Agriculture, vol. 7. From a symposium, Wageningen, The Netherlands, Dec. 1987.

Psychopharmacology. Current Trends. Daniel E. Casey and A. Vibeke Christensen, Eds. Springer-Verlag, New York, 1988. x, 212 pp., illus. \$77.60. Psychopharmacology Series, vol. 5. From a symposium, Denmark, 1987.

The Recombination of Genetic Material. K. Brooks Low, Ed. Academic Press, San Diego, CA, 1988. xvi, 506 pp., illus. \$65.

Reliability in Computing. The Role of Interval Methods in Scientific Computing. Ramon E. Moore, Ed. Academic Press, San Diego, CA, 1988. xvi, 428 pp., illus. \$49.95. Perspectives in Computing, vol. 19. Based

on a workshop, Columbus, OH, Sept. 1987.

Renormalization of Quantum Field Theories with Non-Linear Field Transformations. P. Breitenlohner, D. Maison, and K. Sibold, Eds. Springer-Verlag, New York, 1988. vi, 239 pp. \$24.20. Lecture Notes in Physics, vol. 303. From a workshop, Tegernsee, F.R.G., Feb. 1987.

Reproductive Success. Studies of Individual Variation in Contrasting Breeding Systems. T. H. Clutton-Brock, Ed. University of Chicago Press, Chicago, 1988. x, 538 pp., illus. \$75; paper, \$29.95.

Role of Prolactin in Human Reproduction. M. Mizumo, H. Mori, and Y. Taketani, Eds. Karger, Basel, 1988. x, 313 pp., illus. \$172.75. Based on symposia, Tokyo, Japan, 1985-1987.

Scale Insects of Central Europe. M. Koszarab and F. Kozár. Junk, Dordrecht, 1988 (U.S. distributor, Kluwer, Norwell, MA). 456 pp., illus., + plates. \$112. Series Entomologica, vol. 41.

Sleep '86. W. P. Koella *et al.*, Eds. Fischer, Stuttgart, 1988. xviii, 466 pp., illus. \$160. From a congress, Szeged, Hungary, Sept. 1986.

The Sociology of Science and Technology. Susan Leigh Star, Ed. University of California Press, Berkeley, 1988. pp. 197-310. Paper, \$9. *Social Problems*, vol. 35, no. 3 (1988).

Space Science in the Twenty-First Century. Imperatives for the Decades 1995 to 2015. National Research Council. National Academy Press, Washington, DC, 1988. Seven volumes. Overview. xxii, 84 pp. Astronomy and Astrophysics. x, 72 pp., illus. Fundamental Physics and Chemistry. xiv, 93 pp., illus. Life Sciences. x, 143 pp. Mission to Planet Earth. xvi, 121 pp. Planetary and Lunar Exploration. x, 111 pp. Solar and Space Physics. x, 139 pp., illus. Each volume, paper, \$12; the set, \$67.

Vocal Physiology. Voice Production, Mechanisms and Functions. Osamu Fujimura, Ed. Raven, New York, 1988. xxvi, 481 pp., illus. \$95. Vocal Fold Physiology, vol. 2. From a conference, Tokyo, Japan, Jan. 1987.

Wittgenstein: A Life. Young Ludwig, 1889-1921. Brian McGuinness. University of California Press, Berkeley, 1988. xiv, 322 pp. + plates. \$22.50.

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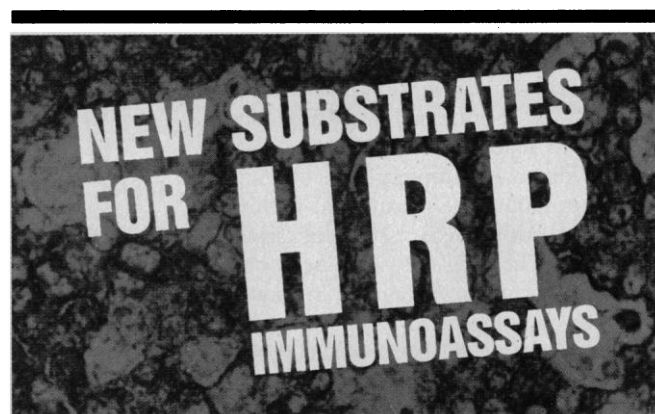
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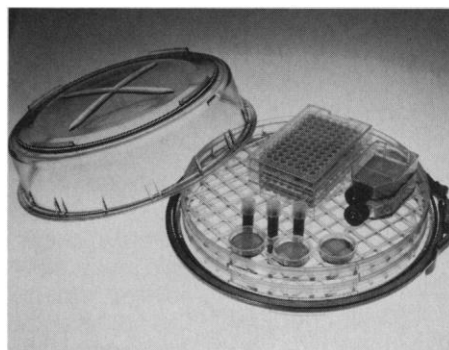
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ASSISTANT PROFESSOR—MOLECULAR ENDOCRINOLOGY—Applications are invited for a tenure-track position with an attractive start-up package in the Department of Animal Science and Agricultural Biochemistry at the University of Delaware. Applicants must have a Ph.D. and postdoctoral experience in endocrinology and molecular biology. The individual should be interested in using molecular approaches to study hormones/receptors that affect growth and/or reproduction of poultry. The individual should have a sincere interest in research and teaching, and be capable of cooperating with other department members. Send curriculum vitae, research interests and four letters of recommendation by 15 January 1989 to: **Dr. Larry A. Coggburn, Chair of Faculty Search Committee, Department of Animal Science, Room 040, Townsend Hall, University of Delaware, Newark, DE 19717-1303.** *The University of Delaware is an Equal Opportunity Employer which encourages applications from qualified minority groups and women.*

DEPARTMENT OF BIOLOGY ASSISTANT PROFESSOR POSITION

The Department of Biology, University of Wisconsin Center System, invites applications for a full-time, tenure-track position at the assistant professor level on the Rock County Campus, Janesville, beginning fall 1989. A doctorate is required with strengths in genetics and bacteriology and ability to teach introductory microbiology, botany, and genetics. Salary commensurate with experience. Send curriculum vitae and three letters of reference to: **Dr. Koby Crabtree, Chair, Department of Biology, University of Wisconsin Center—Marathon, 518 South 7th Avenue, Wausau, WI 54401** by 16 December 1988. *The University of Wisconsin is an Affirmative Action/Equal Opportunity Institution.*

POSITIONS OPEN

DEPARTMENT OF BIOLOGY ASSISTANT PROFESSOR POSITION

The Department of Biological Sciences, University of Wisconsin Center System, invites applications for a fulltime, tenure-track position at the assistant professor level on the Marathon County Campus, Wausau, WI, anticipated to open in the fall of 1989. Quality teaching is emphasized; research and community service activities are expected. Applicants should have a Ph.D. and be qualified to teach zoology and human physiology and anatomy. Opportunities may become available for additional offerings in candidate's area of interest including ecology, limnology, or genetics. To apply, send curriculum vitae, and three letters of reference to: **Dr. Koby Crabtree, Chairman, Department of Biological Sciences, University of Wisconsin Center—Marathon County, 518 South 7th Avenue, Wausau, WI 54401.** Application deadline: 15 January 1989. *The University of Wisconsin Centers particularly encourage applications from women and minorities.*

ASSISTANT PROFESSOR OF ANATOMY

The Department of Anatomy, The Ohio State University, is seeking candidates for a tenure-track position at the assistant professor level. The department has strong research programs in neuroscience and cell biology. We are seeking a neuroscientist with expertise using cellular or molecular approaches. Candidates must have a Ph.D. or M.D., the ability to establish a strong independent research program, and at least 2 years of postdoctoral experience. Teaching responsibilities will be in neuroscience for professional and graduate students. *We especially encourage minority applicants to apply.* Send curriculum vitae and three letters of reference by 4 February 1989 to: **James S. King, Ph.D., Professor and Chairman, Department of Anatomy, The Ohio State University, 333 West 10th Avenue, 4072 Graves Hall, Columbus, OH 43210-1239.** *The Ohio State University is an Equal Opportunity Employer.*

ASSISTANT PROFESSOR—ANATOMY: Full-time, tenure-track. Searching for individual interested in the developmental biology of connective tissues in the broadest sense; approaching problems of differentiation and morphogenesis using techniques of molecular and structural biology. Special attention given to candidates who use techniques of high-resolution imaging, image analysis, and contemporary molecular and cell biology in their research. *The University of New Mexico encourages applications from minorities and women.* Nominations and applications, complete with curriculum vitae and names of three references, should be forwarded by 30 January 1989, to: **Dr. Robert O. Kelley, Chairperson, Department of Anatomy, University of New Mexico Medical Center, Albuquerque, NM 87131.** *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR—BIOGEOGRAPHER/PLANT ECOLOGIST. Tenure-track position for appointment in August 1989. Biogeographer or plant ecologist with Ph.D. at time of appointment. Natural scientist with demonstrated interests in spatial aspects of, and human influences on, terrestrial biosystems. Research orientation and commitment to quality teaching. Candidates should submit a letter of application, curriculum vitae, and names of three references by 1 February 1989 to: **Anthony J. Brazel, Chair, Search Committee, Department of Geography, Arizona State University, Tempe, AZ 85281-0104.** *Arizona State University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF BIOLOGY. Tenure-track position, effective 1 September 1989. Ph.D. required. Teach upper-division courses in speciality as well as introductory courses. Primary interest in vertebrate physiology; additional interests in development and/or invertebrate zoology desirable. Teaching in interdisciplinary programs possible. We encourage research involving undergraduates.

Send curriculum vitae, summary of academic training, a statement of teaching and research interests and career goals, and three letters of recommendation to: **Dr. John Shepherd, Biology Department, College of Liberal Arts, Mercer University, Macon, GA 31207.** *Women and minorities are encouraged to apply. Equal Opportunity Employer.* Deadline: 20 January 1989.

POSITIONS OPEN

ASSISTANT PROFESSOR EVOLUTIONARY BIOLOGY

A tenure-track position is available in the newly organized Department of Ecology and Evolutionary Biology at Rice University for an evolutionary biologist with strengths in both theoretical and empirical investigations of field problems. The successful applicant will be expected to develop a strong externally-funded research program and to participate in undergraduate and graduate instruction. An interest in interacting with faculty members outside the applicant's specialty is highly desirable. Interests in the department include global ecology, population and community ecology, and evolution of social behavior. Postdoctoral experience is required. A résumé, a brief outline of research plans, and three letters of recommendation should be sent to: **P. A. Harcombe, Chairman, Department of Ecology and Evolutionary Biology, Rice University, P.O. Box 1892, Houston TX 77251.** Applications should be received by 15 January 1989. *Rice University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR MOLECULAR BIOLOGY/GENETICS

The Brigham and Women's Hospital and Harvard Medical School are seeking applicants at the level of assistant professor in the Department of Medicine in the general area of gene regulation or other aspects of molecular genetics including development. Candidates should possess an M.D., M.D./Ph.D. or Ph.D. and have demonstrated significant scientific accomplishments and promise. Sufficient resources are available to allow the successful candidate to embark on a vigorous, independent research program. Applicants should have curriculum vitae and bibliography, a brief statement of research interests (less than 500 words), and three letters of recommendation sent to: **William W. Chin, M.D., Head, Division of Genetics, Department of Medicine, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115.**

Brigham and Women's Hospital and Harvard Medical School are Equal Opportunity/Affirmative Action Employers.

UNIVERSITY OF WISCONSIN-PARKSIDE TWO ASSISTANT PROFESSOR POSITIONS IN BIOLOGICAL SCIENCES

The University of Wisconsin (UW)-Parkside Biological Sciences Department, a Center of Excellence designated by the UW System Board of Regents, plans to add two tenure-track faculty for September 1989. The department offers an excellent undergraduate program with options/concentration in general biology, pre-health sciences and molecular biology and a M.S. program in applied molecular biology with emphasis on biotechnology. The environment of the 12-person department is one of active research programs with a majority of our faculty funded from external sources. The successful candidate should participate in the undergraduate and graduate programs and should share our philosophy of excellence in teaching, research and service.

1. **MOLECULAR BIOLOGIST/MICROBIOLOGIST:** with proven competence in applying the techniques of molecular biology and biotechnology. The research program can be in any microbial system.

2. **BIOLOGIST:** the field of specialization is open (e.g., developmental biology, genetics, immunology, physiology, physiological or molecular ecology, virology) however, research focus is to be at the level of whole organisms. Competence in use and applications of the latest techniques of the subspecialty is expected. Strength in quantitative approaches to biology is desired.

Ph.D. is required. Candidates with postdoctoral experience are preferred. *Women and minorities are encouraged to apply.* Applications, including a letter of interest, curriculum vitae, a brief summary of research goals, representative publications and three letters of reference should be sent to the address given below. Review of applications will begin on 16 January 1989 and continue until the positions are filled. **Dr. S. P. Datta, Chairperson, Biological Sciences Department, University of Wisconsin-Parkside, P.O. Box 2000, Kenosha, WI 53141. Telephone: 414-553-2469/553-2327.**

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

POSITIONS OPEN

ASSISTANT PROFESSOR DEPARTMENT OF PHYSIOLOGY QUEEN'S UNIVERSITY

The Department of Physiology, Queen's University, is seeking an individual with research accomplishments and interests in the molecular biology of nerve regeneration to be appointed as an assistant professor. Priority will be given to an applicant with experience in immunocytochemical and in situ hybridization techniques. The successful applicant will be expected to acquire salary and research support through applications to the Medical Research Council or other agencies. *Candidates of both sexes are equally encouraged to apply. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.* Applicants should submit curriculum vitae, a brief statement of their research interests and objectives, selected reprints, and the names of three referees from whom a confidential assessment of research and teaching abilities may be obtained to: **Dr. C. K. Chapler, Department of Physiology, Queen's University, Kingston, Ontario, Canada K7L 3N6.**

Applications will be accepted until 31 January 1989.

ASSISTANT PROFESSOR—BIOLOGY

The joint Biology Department of the College of St. Benedict and St. John's University seeks to fill a tenure-track position beginning fall term 1989. The successful candidate will be responsible for a section of the introductory course for biology majors and microbiology for nursing students. A Ph.D. is required. A strong commitment to undergraduate liberal arts education and expertise in virology or microbial ecology is preferred. Send curriculum vitae, three letters of recommendation, and transcripts to: **Kathy Flynn, Wage and Benefit Coordinator, College of St. Benedict, St. Joseph, MN 56374.** Applications received after 28 December 1988, cannot be guaranteed consideration. *Women and minority applicants are encouraged to apply.*

THE MEDICAL COLLEGE OF GEORGIA ASSISTANT PROFESSOR OF PHARMACOLOGY AND TOXICOLOGY

A tenure-track faculty position is available in the Department of Pharmacology and Toxicology at the Medical College of Georgia for individuals with a strong research background in areas related to vascular or cardiac pharmacology. Applicant should have a Ph.D. or M.D., significant postdoctoral research accomplishments, and the ability to respond to new challenges. Current strengths of our department are in the neuroscience and cardiovascular areas. Appointees are expected to establish a strong, independent research program and participate in the education of our medical and graduate students. Please send curriculum vitae, bibliography, summary of professional goals, and names of three references to: **Dr. R. W. Caldwell, Department of Pharmacology and Toxicology, Medical College of Georgia, Augusta, GA 30912.** *The Medical College of Georgia is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR—PSYCHOLOGY

The Department of Psychology of the American University invites applications for a tenure-track position at the assistant professor level in neuropsychology—clinical neuropsychology or experimental neuropsychology (human or animal), beginning in the fall of 1989. Persons with interests such as neuropsychological dysfunction, brain mechanisms in cognitive function, learning and memory, or developmental neurobiology are encouraged to apply.

Responsibilities include teaching and advising undergraduate and graduate students (in experimental and APA clinical doctoral programs and general master's programs), supervising student research, scholarship and university service. Qualifications: Ph.D. and evidence of strong scholarship and research promise. Position subject to final budgetary approval. Send curriculum vitae, letter describing research and teaching experience, and names of three references by 1 February 1989 to: **Chair, Neuropsychologist Search Committee, Department of Psychology, The American University, Washington, DC 20016.** *The American University is an Equal Employment Opportunity/Affirmative Action University; minority and women candidates are encouraged to apply.*

POSITIONS OPEN

HARVARD UNIVERSITY ASSISTANT PROFESSOR CELLULAR AND DEVELOPMENTAL BIOLOGY (CDB)

The Department of Cellular and Developmental Biology intends to make an appointment at the assistant professor level effective September 1990 or earlier. Our department covers a broad range of topics in cellular biology, developmental biology and molecular genetics. We are seeking outstanding candidates in any of these fields. We are particularly interested in possible appointments in the areas of vertebrate development, neurobiology, and plant molecular biology. However, we will consider exceptional applicants in other fields as well. *We encourage applications from women and minority groups.* Applications should include curriculum vitae, reprints of publications, and a statement of present and future research plans. Complete applications and three letters of recommendation, solicited by the applicant, should be received no later than 1 February 1989 by:

**Diane Baldwin, Administrator
CDB Search Committee
Cellular and Developmental Biology
The Biological Laboratories
Harvard University
16 Divinity Avenue
Cambridge, MA 02138
Telephone: 617-495-2327**

Harvard University is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT/ASSOCIATE PROFESSOR PHYSIOLOGY/PEDIATRICS (CRITICAL CARE MEDICINE) EASTERN VIRGINIA MEDICAL SCHOOL

The Physiology/Pediatrics program is seeking to fill a faculty position at the assistant/associate professor level beginning July 1989 or sooner. Applicant expected to foster an independent research program and interact with ongoing research in the department of pediatrics. Candidates should have a Ph.D. in physiology, and demonstrated abilities in research and teaching. Send a letter of application, curriculum vitae, statement of research plans, and three names of references to: **Dr. G. J. Pepe, Chairman, Department of Physiology, P.O. Box 1980, EVMS, Norfolk, VA 23501.** *EVMS is an Affirmative Action/Equal Opportunity Employer and encourages applications from protected and minority groups.*

ASSISTANT OR ASSOCIATE PROFESSOR OF PHYSICAL SCIENCES EDUCATION. Teach courses in one of the departments of the Physical Sciences area, engage in scholarly activities, and assist with development and implementation of a program in Physical Sciences Education. Appointment at rank appropriate to qualifications (\$27,588 to \$48,204). Applicant must have Ph.D. degree in one of classical physical sciences areas, broad background in the physical sciences and demonstrated emphasis in science education as a primary interest. Applicants are to submit letter of application and curriculum vitae to: **Dr. James D. Crum, Dean, School of Natural Sciences, California State University, San Bernardino, CA 92407.** Applications will be accepted until position filled: will not close prior to 1 February 1989. *An Equal Opportunity, Affirmative Action Section 504, Title IX Employer.*

ASSISTANT/ASSOCIATE PROFESSORS. The Department of Biology at Clarkson University invites applications for two tenure-track positions. Applicants with research interests in (i) microbial genetics or physiology and (ii) neurobiology, biochemistry, cell biology, developmental biology or microbiology at the molecular level will be considered. Clarkson provides competitive salaries and research set-up funds. Clarkson University, a private institution emphasizing engineering and science, is located in a college-town environment of four nearby colleges with a total academic population of approximately 14,000 students and faculty. Applicants should send a current curriculum vitae, reprints, a statement of research interests, and names of three references to: **A. E. Linkins, Chairman, Department of Biology, Clarkson University, Potsdam, NY 13676.** Deadline for application is 20 January 1989 or until positions are filled. *Clarkson University is an Affirmative Action/Equal Opportunity Employer.*

NATIONAL CANCER INSTITUTE
National Institutes of Health, Public Health Service

CANCER PREVENTION FELLOWSHIP PROGRAM (CPFP)

The DIVISION OF CANCER PREVENTION AND CONTROL (DCPC) is accepting applications for the Cancer Prevention Fellowship Program (CPFP). The primary purpose of this program is to attract individuals from a multiplicity of health science disciplines into the field of cancer prevention and control research. The program provides for : participation in the DCPC Cancer Control Academic Program (a formal four-month course in cancer prevention and control); 20 months at NCI working directly with individual preceptors on ongoing cancer prevention and control projects; and, one year at a DCPC-approved cancer control program or State Health Department (may be optional). Funding permitting, up to 10 Fellows will be accepted for up to three years of training, beginning August 27, 1989.

APPLICANTS MUST (BY THE DEADLINE):

1. Possess an M.D. or D.O. degree from a U.S., territorial, or Canadian medical school OR foreign medical graduates must have current ECFMG/FMGEMS certification and have completed one year residency in a training program approved by the Accreditation Council for Graduate Medical Education --OR-- Possess other accredited U.S., territorial, or Canadian doctoral degree (Ph.D., Dr. P.H., D.D.S., etc.) in a discipline related to cancer prevention and control research (biomedical, medical, nutritional, public health or behavioral sciences). Foreign doctoral graduates must provide documented evidence that the foreign education is comparable to doctoral education received in accredited institutions noted above;
2. Possess U.S. citizenship or be a resident alien eligible for citizenship within four years;
3. Complete and return the application packet by the deadline (including arranging for official academic transcripts and four current, original letters of reference to be sent directly by the academic institutions and referees to the CPFP Coordinator).

For questions concerning the program's scientific or administrative aspects, please contact Dr. Peter Greenwald or Mrs. Barbara Redding at (301) 496-8640. Application packets may be obtained by sending a POSTCARD with your name and home address to CPFP Coordinator, NIH/NCI/DCPC/CCAB, EXPS Terrace Level, 9000 Rockville Pike, Bethesda, MD 20892. Please do not send any material until after you have read the instructions in the application packet.

DEADLINE FOR RECEIPT OF APPLICATIONS: JANUARY 11, 1989
NIH is an Equal Opportunity Employer

RESEARCH ASSOCIATE IN DNA SEQUENCING

Amgen, a recognized leader in biotechnology, has an immediate opportunity for a Research Associate in our DNA Sequencing Group. Responsibilities for this position include providing critical support for on-going exploratory research projects.

Candidates for this position must have a BS or MS degree in biochemistry, molecular biology or a related field. Familiarity with basic laboratory principles related to molecular biology is essential. Experience with DNA sequencing methodologies is highly desirable.

Amgen offer an excellent compensation and benefits package as well as the opportunity to contribute to a team effort in a challenging research environment. If you would like to be a part of a company that places a high priority on human resources please send a resume, in confidence, to:

Recruitment, Dept. #361
AMGEN
1900 Oak Terrace Lane
Thousand Oaks
CA 91320

Equal
Opportunity
Employer

AMGEN

Biochemistry Position

G.D. Searle, a worldwide leader in the pharmaceutical industry, has an immediate opening for an experienced laboratory professional to work in the Department of Cardiovascular Diseases Research. The individual will participate in basic and applied research programs directed toward the discovery of novel cardiovascular therapeutic agents.

The successful candidate should have a BS/MS in Biology or Biochemistry with a minimum of 3 years' laboratory experience. Requirements include proficiency in protein purification and assay development and experience in several of the following areas: enzyme assays, column chromatography, electrophoresis, immunoassays, and receptor binding methodology. Good oral and written communication skills are necessary.

The position is available at the St. Louis site of G.D. Searle R&D in the newly built, modern Life Sciences facility. This offers a unique opportunity to interact with a multidisciplinary team of scientists in a stimulating research environment. G.D. Searle & Company, a wholly owned subsidiary of Monsanto Company, offers a competitive salary and benefits plan. Qualified applicants should send their resume in confidence to: **Joan Lineberry - GMO; G.D. SEARLE & COMPANY; Monsanto Life Sciences Center BB4E; 700 Chesterfield Village Parkway; St. Louis, MO 63198.** An Equal Opportunity Employer.

SEARLE



DOW CHEMICAL U.S.A.

The Agricultural Products Department of Dow Chemical U.S.A. has several immediate openings in insecticide discovery research. The successful candidates will join a multidisciplinary team of biochemists, entomologists, molecular biologists and chemists dedicated to the discovery of innovative crop protection practices. This expanding organization is currently located in the San Francisco Bay Area but will relocate in 1991 to larger, newly constructed research facilities in Midland, MI.

BIOANALYTICAL CHEMIST: BS or MS in Biochemistry, Organic Chemistry or a related discipline and experience with chromatographic techniques (GC and HPLC) is required. Prior experience with radioisotopes and personal computers is desirable.

BIOCHEMISTS/PHYSIOLOGISTS: BS or MS in Biochemistry, Pharmacology or a related discipline required. Responsibilities include evaluation of potential crop protection chemicals using biochemical and electrophysiological techniques. Experience with nerve recording techniques, enzyme assays and radioligand binding assays is highly desirable.

Dow Chemical offers a salary and benefits package commensurate with experience and outstanding opportunities for career growth and advancement.

Qualified candidates may send their resume to: Hugh West, Mgr. Employee Relations, Dow Chemical U.S.A., P.O. Box 9002, Walnut Creek, CA 94598-0902. Dow Chemical is an equal opportunity employer.

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR: MOLECULAR BIOLOGY

The Department of Pharmacology at SUNY Health Science Center at Syracuse invites applications for a tenure-track position available from July 1989. Candidates using molecular biological techniques to study cardiovascular cell biology, neurobiology, or membrane transport are especially encouraged to apply. The qualified individual will be expected to have or to develop a productive, extramurally funded research program and to participate in teaching, medical and graduate students. Send a statement of research interests, curriculum vitae, and direct three letters of reference by 1 January 1989 to: **Dr. Karina Meiri, Department of Pharmacology, SUNY Health Science Center at Syracuse, 766 Irving Avenue, Syracuse, NY 13210.**

An Equal Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE PROFESSORS DEPARTMENT OF ANATOMY UNIVERSITY OF ARIZONA

As part of a University-wide expansion of Biological Sciences and Biotechnology, the Department of Anatomy at the Arizona Health Sciences Center is seeking two new tenure-track faculty members. While preference will be given to applicants with research interests in the cellular or molecular aspects of vertebrate developmental or reproductive biology, outstanding candidates in other areas also will be seriously considered. Candidates should have pertinent postdoctoral experience. We prefer candidates at the assistant professor level, but more senior appointments may be made for exceptional individuals. Successful candidates will be expected to establish an excellent research program and participate in the instruction of graduate and/or medical students. Submit curriculum vitae, two copies of relevant papers, a detailed description of research goals, and have three supporting letters sent to: **Dr. Mary J. C. Hendrix, Search Committee, Department of Anatomy, University of Arizona, 1501 North Campbell, Tucson, AZ 85724.** To insure consideration, applications should be received by 19 December 1988; however, applications will be accepted until the position is filled. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer and applications from females and minority groups are strongly encouraged.*

BIOCHEMIST UNIVERSITY OF CINCINNATI COLLEGE OF MEDICINE DEPARTMENT OF DERMATOLOGY

Department of Dermatology at the University of Cincinnati College of Medicine seeks Ph.D. as postdoctoral fellow/assistant professor for isolation of new cutaneous hormone. Candidate must be knowledgeable about HPLC and similar technologies for purification of prostaglandins and/or peptides, and with hormone mechanisms of action and regulation of cellular division. Position immediately available. Submit résumé to: **James J. Nordlund, M.D., U.C. College of Medicine, Department of Dermatology, 231 Bethesda Avenue, Mail Location #592, Cincinnati, OH 45267-9592.**

UC is an Equal Opportunity Employer

BIOCHEMIST/MOLECULAR IMMUNOLOGIST

The Department of Biochemistry and Biophysics at Iowa State University invites applications for a tenure-track position. Rank and salary will depend on qualifications. We seek an individual who is highly motivated toward research and shows evidence of a creative research program in molecular aspects of the immune system or other macromolecular recognition systems. Applicants must have a commitment to undergraduate and graduate teaching in general biochemistry/biophysics as well as molecular immunology. Generous start-up funding and space in a new molecular biology building will be available. Send curriculum vitae, list of publications, two to three representative reprints, a statement of research interests, and three letters of recommendation to: **Dr. Jack Horowitz, Department of Biochemistry and Biophysics, Iowa State University, Ames, IA 50011 by 16 January 1989.** *Iowa State University is an Equal Opportunity/Affirmative Action Employer. Women, minorities, and other protected groups are encouraged to apply.*

POSITIONS OPEN

BEHAVIORAL NEUROSCIENTIST— UNIVERSITY OF WASHINGTON

Tenure-track faculty position for a person with background and interests in behavioral neurosciences, with specialization in any relevant area, including sensory/perceptual processes, learning/memory, and other fields. The person should be broadly trained in modern neurosciences techniques. The position is targeted for an assistant professor appointment. *Applications are encouraged particularly from minority and women applicants.* Responsibilities include teaching at the undergraduate and graduate levels and research in areas appropriate to the individual's field of specialization. Applications, including curriculum vitae, a statement of research and teaching interests, and four letters of recommendation, should be sent to: **Irwin G. Sarason, Chair, Department of Psychology NI-25, University of Washington, Seattle, WA 98105.** Priority will be given to applications received before 15 January 1989. *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

BIOLOGISTS. Stetson University. Assistant professors. Two tenure-track positions. Begin September 1989. Ph.D. required. **VERTEBRATE BIOLOGIST** trained in comparative anatomy and developmental biology. **ECOLOGIST** with skills in quantitative methods and computer application. Stetson is an independent university of 2000 students committed to excellence in undergraduate education. Both positions provide for innovative course development for non-science majors. Salary competitive. Send curriculum vitae and names of references to: **Dr. F. M. Knapp, Head, Department of Biology, Stetson University, DeLand, FL 32720.** Application deadline 1 January 1988. *An Equal Opportunity Employer. Women and minorities encouraged to apply.*

BIOLOGY FACULTY—Lake Forest College. Two positions as assistant or associate professor will be available beginning August 1989 for highly-qualified Ph.D.'s interested in teaching and conducting research with undergraduates in a liberal arts environment. Research activities should apply molecular and/or cellular approaches to questions in genetics, evolution, or ecology. Teaching will consist of a selection of courses in introductory, nonmajor, or advanced subjects to complement research interests. Start-up support will be available; new research facilities are being constructed. A letter stating teaching and research plans, curriculum vitae, and three letters of reference should be sent by 16 January 1989 to: **David Towle, Chairperson, Department of Biology, Lake Forest College, Lake Forest, IL 60045.** *Applications from minorities and women are actively encouraged.*

Michigan—**BIOMATERIALS.** Two tenure-track positions are available, at the **ASSISTANT AND ASSOCIATE PROFESSOR** level, in the Department of Biologic and Materials Sciences, School of Dentistry. Applicants must have a Ph.D. degree in materials or biomaterials science, or in biological science with a strong background in materials science. A strong interest in teaching and research is essential. Teaching experience in dental or biomaterials is preferred, and demonstrated research capabilities are essential. Responsibilities will include teaching biomaterials, interactions with faculty and graduate students in clinical departments, research, and service. Excellent opportunities for interdisciplinary research exist. Rank and salary commensurate with experience. *The University is an Equal Opportunity/Affirmative Action Employer and specifically invites women and minority candidates to apply.* Send curriculum vitae by 30 January 1989 to: **The Biomaterials Search Committee, 2217 School of Dentistry, The University of Michigan, Ann Arbor, MI 48109-1078.**

CELL BIOLOGIST. ASSISTANT PROFESSOR. Tenure-track position. To start September 1989. Ph.D. and expertise in plant tissue culture and genetic engineering required. Salary negotiable (probable range: \$23,000 to \$32,000). Duties include teaching undergraduate courses in cell biology and general biology and a graduate course in area of expertise and advising undergraduate and graduate students. Research is encouraged. Send curriculum vitae, official undergraduate and graduate transcripts, three letters of recommendation, and a brief statement of professional goals to: **W. Mechling, Hiring Committee, Biology Department, Towson State University, Baltimore, MD 21204.** Deadline for completed application, 1 February 1989. *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CELL BIOLOGIST

The Division of Cardiovascular Disease of the University of Alabama at Birmingham invites applications for a faculty member to work with hypertension research group. Must be expert in cell biology and culture of smooth muscle and endothelial cells. Apply to: **Hypertension Program of the Division of Cardiovascular Disease, University of Alabama at Birmingham, UAB Station, Birmingham, AL 35294, Attention: Donna Cline.** *An Equal Opportunity/Affirmative Action Employer.*

CELL PHYSIOLOGIST—BIOCHEMIST ASSISTANT PROFESSOR

The Biology Department at Williams College anticipates an opening for a broadly trained cellular physiologist with background in biochemistry to teach courses in modern cell biology and biochemistry. Interest in endocrinology particularly desirable, but not essential. Ph.D. required. Postdoctoral experience desirable. Faculty are expected to conduct active research programs in which qualified undergraduates may be involved. Start-up funds for research are provided. Position available 1 July 1989. Please send curriculum vitae, statement of research/teaching interests, and three references by 31 January 1989 to: **Chair, Department of Biology, Williams College, Williamstown, MA 01267.**

An Equal Opportunity/Affirmative Action Employer, Williams College especially welcomes applications from women and minority candidates.

CHAIR— MICROBIOLOGY AND IMMUNOLOGY

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

CHAIRPERSON, DEPARTMENT OF FORESTRY MICHIGAN STATE UNIVERSITY EAST LANSING, MI 48824

Responsibilities: The Chairperson is the chief administrative officer of the Department of Forestry and reports directly to the Vice Provost and Dean of the College of Agriculture and Natural Resources. The major responsibility of the chairperson is to provide a creative and scholarly environment for faculty, staff and students. Specifically to: (i) Provide administrative direction for all programs within the Department of Forestry. (ii) Provide academic leadership to faculty, staff and students in the development and strengthening of departmental programs. (iii) Serve as principal departmental liaison with other units of the university, agencies of government, industry, professional societies and public service groups.

Qualifications: (i) Earned doctoral degree, and at least one degree in forestry from an accredited institution. (ii) An established record of academic achievement in teaching, research, extension, international or public service programs in forestry. (iii) Demonstrated administrative ability, strong leadership qualities and a record of activity in professional affairs. (iv) Faculty experience and familiarity with the philosophy and functions of a land-grant university.

Salary: Commensurate with the qualifications. In addition, Michigan State University offers an extensive fringe benefit program. Available: 1 February 1989, or as soon thereafter as possible. Application deadline: 1 January 1989 or until filled. Interested persons should send résumés to:

**Dr. Daniel E. Keathley
Search Committee Chairperson
Department of Forestry
126 Natural Resources Building
Michigan State University
East Lansing, MI 48824
Telephone: 517-353-9640**

MSU is an Affirmative Action/Equal Opportunity Institution.

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As an industry leader approaching \$5 billion in sales, Abbott Laboratories has consistently proven itself capable of meeting the toughest challenges in the healthcare products market. We were the first with a test for the detection of AIDS. And led the way with new products to treat cancer, epilepsy, and cardiovascular ailments. Our commitment to quality research and development makes 1988 another in a long line of record years for Abbott Laboratories. As a result of this consistent growth, we currently seek the following professionals to help us maintain a competitive edge in our Pharmaceutical Products Division.

POSTDOCTORAL FELLOWS (PhD) AND RESEARCH ASSISTANTS (MSc, BS) — As a result of a recent NIAID grant, our National Cooperative Drug Discovery Group requires qualified applicants for AIDS research in the areas of:

Molecular Biology and Protein Biochemistry of HIV — experience in one or more areas of recombinant DNA techniques, expression, protein purification, characterization and refolding, or large scale purification enzymology.

Synthesis of HIV Inhibitors — experience in peptide analog design, peptidomimetics and peptide delivery systems.

Molecular Virology — experience in virus purification, viral component isolation, virus assembly, tissue culture-based virus propagation and inhibitor assays.

X-Ray Crystallography of HIV Proteins — experience in all aspects of protein structure determination by x-ray crystallography.

NMR Studies of HIV Proteins — experience in 2-D NMR techniques.

The Postdoctoral Fellowship program provides advanced research training in state-of-the-art techniques of drug design in a highly integrated and cooperative multidisciplinary research environment. Fellows are expected to publish their results and to attend scientific meetings.

BIOCHEMISTS (PhD) — Experience required in enzyme isolation, purification and characterization, enzyme kinetics, electrophoresis, and study of the interaction of small molecules with proteins. Both regular and postdoctoral positions are available.

CARDIOVASCULAR PHARMACOLOGISTS (PhD) — Will set up pathophysiologic *in vivo* models. Experience is required in the physiology of the cardiovascular system, conducting original research in systemic hemodynamics and cardiac dynamics. Strong computer and communication skills are required. Both regular and postdoctoral positions are available.

MOLECULAR PHARMACOLOGISTS (PhD/MD) — Will contribute toward making molecular approaches to drug discovery as members of interdisciplinary teams in the areas of virology/infectious disease, oncology, immunology, cardiovascular biology, or neuroscience. Qualifications include a PhD or MD, 3-4 years postdoctoral training, a substantial publication record, and proven research productivity.

BIOCHEMISTS (MS/BS) — Will carry out basic research on the structure and function of enzymes which are candidates for human therapeutic use. BS or MS required in Chemistry, Biology, or Biochemistry along with at least 2-6 years laboratory research experience in three or more of the following areas: enzyme purification, immunology, spectrophotometric assays, electrophoresis, HPLC, peptide mapping, or peptide synthesis.

Headquartered in an attractive suburban location just 30 miles north of Chicago, Abbott provides outstanding corporate backing and a widely recognized scientific environment. We also provide you with an excellent salary and benefits package including profit sharing and stock retirement plans. For consideration, please send a resume indicating position desired and salary history, in confidence to: **Patricia Handy, Corporate Placement, Dept. SCI/12-2, Abbott Laboratories, Abbott Park, IL 60064.** Abbott is an Affirmative Action Employer.

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POSITIONS OPEN

CHAIRPERSON—BIOLOGY

The Department of Biology, St. Louis University, is seeking a person with a proven record of achievement in research, securing grants, and teaching, to chair a Ph.D.-granting department of eleven faculty. Although we especially encourage applicants in cellular and molecular biology, area of specialization is open. Appointment will be at the senior level effective 1 July 1989. Send curriculum vitae and the names and addresses of three references to: **Chair, Search Committee, Department of Biology, St. Louis University, 3507 Laclede Avenue, St. Louis, MO 63103.** Closing date is 15 January 1989, or until position is filled. *Affirmative Action/Equal Opportunity Employer M/F/H/V.*

CYSTIC FIBROSIS RESEARCH RECOMBINANT DNA LABORATORY

The Cystic Fibrosis Research Program is seeking an individual with experience in recombinant DNA and molecular biology techniques to serve as the **COORDINATOR** of the activities of a Core Laboratory. This individual would provide technical support for research related to cystic fibrosis. The applicant should have an M.S. degree in a health science related field. Requirements include an understanding of molecular biology and lab experience with gel electrophoresis, basic recombinant DNA technology, construction of libraries and DNA sequencing. If not experienced in all techniques, some on-the-job training is possible. Salary depends on previous experience. Send curriculum vitae and three references to:

Dr. Richard A. Maurer
Department of Physiology and Biophysics
Room 5512 Bowen Science Building
University of Iowa College of Medicine
Iowa City, IA 52242

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

DEAN, COLLEGE OF PHARMACY, University of Utah. A distinguished educator/scientist is sought to provide educational, scientific and fiscal leadership for the College. The Dean is the chief administrator of the College, reporting directly to the Vice President for Health Sciences. The College of Pharmacy is research-intensive and committed to excellence in professional and graduate education. Applications will be accepted until 6 January 1989 or until a suitable candidate has been identified. Please send curriculum vitae and names, addresses, and telephone numbers of three or more referees to: **Dr. Douglas E. Rollins, Chairman of the Search Committee, Center for Human Toxicology, College of Pharmacy, University of Utah, Salt Lake City, UT 84112.** *The University of Utah is an Equal Opportunity/Affirmative Action Employer; applications from qualified female/minority candidates are encouraged.*

DEVELOPMENTAL BIOLOGIST. ASSISTANT PROFESSOR. Nontenure track. Position renewable up to six years. To start September 1989. Contingent upon state funding. Ph.D. required. Salary negotiable (probable range: \$23,000 to \$32,000). Duties include teaching embryology, human anatomy and physiology, human biology, general biology and a graduate course in developmental biology and advising undergraduate and graduate students. Research is encouraged. Send curriculum vitae, official undergraduate and graduate transcripts, three letters of recommendation, and a brief statement of professional goals to: **R. Smoes, Hiring Committee, Biology Department, Towson State University, Baltimore, MD 21204.** *An Equal Opportunity/Affirmative Action Employer. Deadline for completed application 1 February 1989.*

ENDOCRINE ASSAY LABORATORY MANAGER: Position available immediately for experienced endocrine technician (B.S./M.S.) with management experience. Located in rural Piedmont of Blue Ridge Mountains. Duties include personnel supervision, budgetary management, development/application of technology and quality control. Experience with immunoassay, radioiodination, steroid technology, ligand binding assays, and bioassays desirable. Contact: **Dr. Don Korinik, Department of Comparative Medicine, Bowman Gray School of Medicine, 300 South Hawthorne Road, Winston-Salem, NC 27103.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

DIRECTOR SCHOOL OF BIOLOGICAL SCIENCES UNIVERSITY OF NEBRASKA— LINCOLN

The University of Nebraska—Lincoln invites nominations and applications of highly qualified individuals for the position of Director, School of Biological Sciences, and Professor with tenure.

The School has a broad range of active research programs from molecular to whole organism biology with emphasis in cell and molecular biology, ecology and evolutionary biology, and plant sciences. The successful candidate will lead the School at a particularly dynamic period of growth and development, helping to fill several tenure-leading positions and influencing the development of newly established, state funded research initiatives that include the Centers for Biological Chemistry, for Biotechnology, and for Microbial Ecology. The School presently consists of 34 budgeted faculty, 80 faculty associated with the graduate program, approximately 80 graduate students and 500 undergraduate majors.

Candidates must have an excellent record of research achievement, a successful record of extramural funding, a Ph.D. in biological sciences or related fields, a commitment to undergraduate and graduate education, and demonstrated administrative potential to provide leadership to guide continued development of the School's diverse research and teaching programs. Salary negotiable.

Please submit a letter of application, current curriculum vitae and other pertinent material, including evidence of leadership and administrative potential as well as names, addresses, and telephone/telex numbers of five references postmarked by 20 February 1989 (or until a suitable candidate is identified) to:

Dr. Anthony Joern, Search Chair
Director of Biological Sciences
c/o Dean's Office
College of Arts & Sciences
University of Nebraska—Lincoln
Lincoln, NE 68588-0312
Telephone: 402-472-2724
FAX: 402-472-2410

Affirmative Action/Equal Opportunity Employer

ENDOCRINOLOGY AND METABOLISM—

Two positions (Ph.D. or M.D.) to join a multidisciplinary research group in diabetes and obesity are available immediately. Interest could include in vitro metabolism in human hepatocytes, adipocytes and muscle fibers; insulin signals; insulin receptors structure and function; assessment in vivo insulin action and metabolism in man using isotopes; application of molecular genetic techniques to the etiology and pathogenesis of diabetes. Please send curriculum vitae to: **Jose F. Caro, M.D., Department of Medicine/Endocrinology, East Carolina University School of Medicine, Greenville, NC 27858.** *An Equal Opportunity/Affirmative Action Employer. Federal law requires proper documentation of identity and employability at the time of employment. It is requested this documentation be included with your application.*

EVOLUTIONARY BIOLOGIST. The Department of Biology, University of North Carolina at Chapel Hill, seeks an outstanding scientist investigating evolutionary mechanisms at the population level. The appointment to enhance our program in ecology, behavior, evolution, and organismic biology will probably be made at the rank of assistant or associate professor, although all levels will be considered. Appointment will begin in July 1989 or later at the evidence of the appointee. Applicants should send curriculum vitae, a description of research interests, selected publications and four letters of recommendation by 1 March 1989 to: **Evolutionary Biology Search, Department of Biology, University of North Carolina, Chapel Hill, NC 27599-3280.** *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

POSITIONS OPEN

DEAN OF THE GRADUATE SCHOOL UNIVERSITY OF WISCONSIN—MADISON

The University of Wisconsin—Madison is the original University of Wisconsin, and is one of the largest land-grant universities in the United States. The University has approximately 2400 faculty, 4000 professional and administrative staff, 8000 classified employees, and 43,000 undergraduate, graduate and professional students.

The Dean of the Graduate School, as the principal advisor to the Chancellor on research and research issues, has responsibility for the instructional and research environment of over 9400 graduate students in 191 fields at the master's and 123 at the doctoral level. The Dean supervises the directors of 18 research centers on campus and the graduate student academic support programs including admission, financial aid and degree certification. The Dean administers a Graduate School budget of \$59 million and oversees a wide array of research programs with a total budget of more than \$200 million. Major qualifications for the position include a successful record of administrative leadership in higher education, academic accomplishments as a scholar and teacher that meet the standards for a tenured appointment at the rank of full professor in the University of Wisconsin—Madison faculty and a commitment to maintain and expand a strong research tradition at UW—Madison. The position is available 1 July 1989.

Submit applications and nominations by 31 December 1988 to:

Dr. Arthur Kelman, Chairman
Dean of the Graduate School
Search and Screen Committee
UW—Madison
130 Bascom Hall, 500 Lincoln Drive
Madison, WI 53706
Telephone: 608-262-4974

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

DIRECTOR. The Thomas Burke Memorial Washington State Museum, University of Washington, seeks a scholar in a relevant academic discipline with extensive museum experience and demonstrated research, teaching, and development skills to serve as director. As the state's oldest and largest natural history institution, the Burke Museum emphasizes a Pacific Rim perspective; contains significant anthropological, geological, and zoological collections; and maintains active research, exhibition, and public service programs. The museum is an academic unit of the College of Arts and Sciences and the director reports to the Dean. Applicants should have a substantial background in museum management and the academic qualifications appropriate for appointment at the rank of professor in a University of Washington department. A letter of interest, curriculum vitae, and at least four references should be sent to: **Professor Stephen Porter, Chair of the Burke Museum Director Search Committee, Geological Sciences AJ-20, University of Washington, Seattle, WA 98195.** Nominations received prior to 1 December 1988 and applications submitted prior to 15 December 1988 will receive priority consideration. *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

DIRECTOR OF RESEARCH

The National Undersea Research Center at Fairleigh Dickinson University (NURC-FDU) seeks a dynamic individual for its St. Croix, U.S. Virgin Islands facility. With expansion plans for science and technology research in the marine environment, NURC-FDU seeks a versatile scientist with a record of research, administration and managerial accomplishment and proven leadership interest. Primary responsibilities will include overall planning, developing and administration of the research programs, coordination of interdisciplinary subcontracted research, and exploration of new fields of inquiry. The director should have current research knowledge in his field. Salary will be consistent with achievement and background. Interested individuals should submit their curriculum vitae or résumé by 6 January 1989 to:

Chairman, Search Committee
National Undersea Research Center
at Fairleigh Dickinson University
40 Estate Castle Coakley
Christiansted, St. Croix
U.S.V.I. 00820

Fairleigh Dickinson University is an Equal Opportunity/Affirmative Action Institution.

**C
MRC GROUP IN PROTEIN STRUCTURE AND FUNCTION
M**

University of Alberta, Edmonton

FACULTY POSITION IN X-RAY CRYSTALLOGRAPHY

The Medical Research Council of Canada Group in Protein Structure and Function at the University of Alberta invites applications for a Faculty position in the Department of Biochemistry. Applicants should have a strong background in protein/macromolecular crystallography and will be expected to develop a research project that will complement and contribute to the overall research efforts in the group. Appointments can be made at any level from Assistant to Full Professor depending upon the qualifications.

The MRC Group in Protein Structure and Function was established in 1974 and has undergone two successful renewals. In addition to X-ray crystallography, the major techniques of physical biochemistry are included in the armament used by the group members for the study of protein systems: hydrodynamic and spectroscopic methods, 2D nuclear magnetic resonance spectroscopy, protein microsequencing techniques, solid phase synthesis of peptides, recombinant DNA and protein engineering. The X-ray crystallographic laboratories are supported by excellent facilities, two single crystal diffractometers, two rotating anode generators, an SDMD system area detector with two detectors, two molecular graphics systems. The computing facilities at The University of Alberta are excellent. The University mainframe is an Amdahl 5870 operating under MTS. Access to supercomputing facilities is also possible at the Universities of Toronto (Cray) and Calgary (Cyber 205).

In accordance with Canada Immigration regulations, priority will be given to Canadian citizens and permanent residents. The deadline for the position is Dec. 31. Applicants should forward *curriculum vitae*, list of publications and names of three referees as soon as possible to Professor M.N.G. James, Department of Biochemistry, University of Alberta, Edmonton, Alberta, Canada T6G 2H7.

The University of Alberta is committed to the principle of equity in employment.

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MOLECULAR
BIOLOGIST**

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The Sterling Research Group, the world-wide pharmaceutical research and development organization of Sterling Drug, Inc., announces an opening for a Sr. Research Scientist in the Pharmacology Department of its Rensselaer, New York facility.

An excellent opportunity exists for a Protein Biochemist/Molecular Biologist who has an interest in smooth muscle cell proliferation, migration and signal transduction to participate in an interdisciplinary approach to basic research and drug discovery. The successful candidate will have a doctoral degree in biochemistry or a related discipline and at least two years of relevant post-doctoral training.

The Rensselaer facility is located near Albany, New York, which is a center for summer and winter recreational activities. We offer attractive salary and benefit programs and an exciting work environment based on a team approach to research and development.

Please send resume in confidence to:

Mr. John P. Harvey
Employment Administrator

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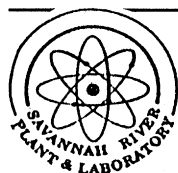
Post-Doctoral Fellowship In Microbial Ecology

**The SAVANNAH RIVER SITE offers three clear advantages:
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NEAR AIKEN, SOUTH CAROLINA**

A Post-doctoral fellowship position at the Department of Energy's Savannah River Laboratory is available immediately in Microbial Ecology. The 2-year fellowship is for a researcher interested in serving on a research team effort on the Microbiology of the Deep Subsurface Program at Savannah River Laboratory. Applicants must have a Ph.D. in Microbial Ecology, Soil Microbiology, or Geomicrobiology. Desirable skills would include ecological immunofluorescent investigations, nucleic acid probes, xenobiotic degradation, anaerobic techniques, and geological familiarity. The position offers applicants an opportunity for innovative research in a well-equipped laboratory on basic and applied microbial ecology projects.

Operated for the United States Department of Energy, the Savannah River Site produces radioactive isotopes for national defense, medicine, and America's space program. While the outstanding professional environment broadens your career horizons, our geographical location offers a mild climate with access to some of the Southeast's most attractive cultural and recreational resources.

Salary is commensurate with your training and experience. Our highly regarded benefits program includes relocation assistance. For confidential consideration, applicants should submit curriculum vitae, reprints and the names, addresses, and telephone numbers of three references to Dr. Carl B. Fliermans, Savannah River Laboratory, Environmental Sciences Division, Aiken, SC 29808.



*An Equal Opportunity Employer M/F/H/V
U.S. Citizenship Required*

POSITIONS OPEN

ENVIRONMENTAL SCIENTIST

The National Research Council (NRC) is seeking a program officer for its Board on Environmental Studies and Toxicology (BEST). Will direct projects in environmental contamination, including new methods for assessment of lead in critical populations and national monitoring of human tissues. Responsibilities include working with committees of experts and providing intellectual overview and guidance. Ph.D. or equivalent in environmental chemistry or toxicology, or related field required. At least 3 years of experience with environmental and/or toxicological issues; practice and/or research also required. Demonstrated ability to understand the use of scientific information in decision-making and to integrate data from a wide variety of disciplines. Please submit curriculum vitae, a recent publication or writing sample, and names of references in confidence to:

NRC/BEST/HA 354 KH
2101 Constitution Avenue, N.W.
Washington, D.C. 20418
Equal Opportunity Employer.

FACULTY

The Department of Internal Medicine, Wayne State University is seeking candidates for a faculty position in the Division of Hematology/Oncology to supervise research in an alkaline evaluation laboratory. Candidates must possess a Ph.D. or M.D. degree, have research experience in anticancer agent drug and development, and have established the ability to conduct independent research and publish results. Responsibilities will include establishing a variety of assays to define the mechanism action of biochemical, cellular and pharmacological agents, developing collaborative research projects, and assisting in the professional and educational commitments of the Division.

Send curriculum vitae to:

Department of Internal Medicine
PAR #07094
3800 Woodward, #218
Detroit, MI 48201

Wayne State University is an Equal Opportunity/Affirmative Action Employer.

Emory University, Department of Radiology, seeks a Ph.D. or M.D. with either NMR spectroscopy or imaging experience for a full-time **FACULTY POSITION**. The candidate must be able to originate fundable research projects using NMR and collaborate with other faculty members (in or out of radiology) on NMR research. Knowledge of spin behavior is essential, and medicine, biology, or biochemistry, analog electronics, and computer science are useful skills.

Two 1-meter clinical imagers operating at 0.5 and 1.5 T and a 30-cm 200-MHz instrument, all fully programmable, will be available. The department is part of an 800-bed tertiary care complex giving ample opportunity for collaborations requiring clinical material. Seven Ph.D. scientists in the radiology department are currently involved full-time in NMR. Qualified candidates please contact:

Dr. Thomas Dixon, Director
Frits Philips Magnetic Resonance
Research Center
419 Woodruff Memorial Building
Emory University
Atlanta, GA 30322

Emory University is an Equal Opportunity/Affirmative Action Employer.

MAYO CLINIC FACULTY POSITIONS IN CANCER RESEARCH

The Department of Oncology invites applications for two faculty members open at any rank. Candidates with expertise in cell molecular biology, biophysics, or immunopathology interested in working in a multidisciplinary program directed toward the molecular characterization, detection, and control of human cancers. Joint appointments in other departments as appropriate. Please send curriculum vitae and names and addresses of three references to: Dr. Matthew M. Ames, Oncology Search Committee, Department of Oncology, Mayo Clinic, Guggenheim 4, Rochester, MN 55905. *An Equal Opportunity/Affirmative Action Institution.*

POSITIONS OPEN

FACULTY POSITION MOLECULAR PHARMACOLOGY

The Department of Pharmacology, Medical College of Ohio, seeks an outstanding individual with research interests in a modern area of membrane biology. The appointment is expected to be made at the assistant professor level, though exceptional senior candidates for a tenured position will also be considered. Excellent facilities, competitive salary, and generous start-up funds are available. Please contact: Dr. Amir Askari, Department of Pharmacology, Medical College of Ohio, Toledo, OH 43699. *Medical College of Ohio is an Equal Opportunity Employer.*

FACULTY POSITION IN BIOCHEMISTRY AT THE UNIVERSITY OF NEBRASKA MEDICAL CENTER

The Department of Biochemistry of the University of Nebraska Medical Center at Omaha is seeking a qualified individual to fill a tenure-leading assistant professor position. All applicants should hold a Ph.D. in biochemistry or a related discipline and should have postdoctoral experience in structural biology. Salary will be commensurate with education and experience. The successful applicant will be expected to develop an independently-funded research program in the areas of protein structure and contribute to building a strong graduate educational program. Please forward curriculum vitae, a statement of research goals, and three letters of recommendation by 31 December 1988, to: Dr. Edward Bresnick, Department of Biochemistry, The University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, NE 68105. Please refer to Position No. 8-6169. *The University of Nebraska is an Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION— NUCLEAR CHEMISTRY

The Department of Chemistry at Indiana University invites applications for a tenure-track position in nuclear chemistry beginning in September 1989. Applicants should have demonstrated outstanding potential for leading a vigorous research program and for teaching at the undergraduate and graduate level. Research in nuclear chemistry at Indiana University is carried out at the Indiana University Cyclotron Facility (IUCF) and other user facilities. IUCF is a national accelerator laboratory which provides variable-energy, light-ion beams up to 500 q^2/A MeV. A dossier including curriculum vitae, list of publications, three letters of reference, and a brief statement of research interests should be sent to: Professor Paul A. Greico, Department of Chemistry, Indiana University, Bloomington, IN 47405. Deadline for receipt of materials is 1 January 1989. *Indiana University is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION— ORGANIC CHEMISTRY

The University of Minnesota, Morris, invites applications for a tenure-track assistant professor position to begin September 1989. Candidates must have/expect Ph.D. organic chemistry by September 1989 and have teaching experience. Highest consideration given to candidates who demonstrate an excellence or promise of excellence in teaching. Candidates must show promise of being able to establish a research program suitable to a small undergraduate liberal arts college. Special consideration given to women and minority candidates and to candidates with some background in biochemistry or bio-organic chemistry. Major responsibility will be teaching undergraduate organic chemistry courses, lecture and lab, to chemistry and biology majors, and preprofessionals in the health sciences. Other responsibilities include sharing administration of the chemistry program and serving the wider activities of the college with other faculty. Candidates should submit complete résumés and three letters of reference by 3 January 1989 to: Dr. James M. Olson, Chair, Division of Science and Mathematics, University of Minnesota, Morris, MN 56267. *The University of Minnesota, Morris, is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

Senior Diabetes Researcher

Join Cal Bio in research on human therapeutics for diabetes/obesity, one of our three focus areas. As a staff or principal scientist, you will lead a group studying insulin action, play a significant role in the direction of diabetes/obesity research in general, and interact closely with our commercial partners in the development of our products. This position requires a minimum of 5-7 years' relevant research experience in addition to a Ph.D.

Cal Bio offers a stimulating work environment and a competitive compensation and benefits program. For immediate consideration, please forward your curriculum vitae to: Liza Mingione, California Biotechnology Inc., Human Resources, MS-S1202, 2450 Bayshore Parkway, Mountain View, CA 94043. We are an equal opportunity/affirmative action employer.

CAL  BIO

SENIOR SCIENTIST

The Growth Factor Research Department of the Merck Research Laboratories has an opening for a senior scientist to study the interaction between protein growth factors and steroid hormones at the cell biological, biochemical and/or molecular biological level. Candidates should have a Ph.D degree in Biochemistry or a related area and a minimum of 1 to 2 years of postdoctoral training. Experience in growth factor or steroid hormone research is desirable but not essential.

Merck Sharp and Dohme Research Laboratories are located in Rahway, New Jersey approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. Interested candidates should submit their resume with the names of three references and salary requirements to Ms. Jacqueline A. Eiermann, Merck & Co., Inc., P.O. Box 2000, Rahway, New Jersey 07065.

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U.S. ENVIRONMENTAL PROTECTION AGENCY'S 1989 VISITING SCIENTISTS AND ENGINEERS PROGRAM

The Environmental Protection Agency's (EPA) Office of Research and Development is accepting applications to its 1989 Visiting Scientists and Engineers Program. Individuals with at least five years experience beyond the Ph.D. are eligible to apply. Those selected will conduct research at an EPA laboratory for one to three years on a full or part-time basis. Applications will be accepted through **April 30, 1989**, on the following topics:

Environmental Research Laboratory, Corvallis, Oregon

- Implication of the loss of biological and genetic diversity in a regulatory context
- Ecological effects of global climate change, stratospheric ozone depletion, tropospheric ozone, acidic deposition and air toxics
- Effects of pollutants on plant populations
- Applied molecular biology of plants

Environmental Research Laboratory, Athens, Georgia

- Spectroscopies of transient processes in natural water systems
- Characterization of redox transformation of inorganic pollutants in aqueous environments
- Analysis of uncertainty in environmental simulation

Robert S. Kerr Environmental Research Laboratory, Ada, Oklahoma

- Microbial transport of hydrophobic neutral organic compounds
- Solute transport in subsurface systems, particularly with respect to macromolecules
- Modeling of the transport of hazardous materials through structured soils

Environmental Monitoring Systems Laboratory, Cincinnati, Ohio

- Development of methods to detect and measure biomarkers of environmental exposure
- Development of recombinant DNA methods for measuring bacteria, viruses and protozoa in environmental samples
- Investigation into the application of advanced analytical techniques to current problems in microbial ecology
- Identification and adaptation of biomarkers for use in establishing ecosystem status and trends
- Enhanced, short-term methods for measuring chronic, aquatic toxicity of wastes and water
- Development of analytical methods for organic disinfection by-products in drinking water

Environmental Monitoring Systems Laboratory, Las Vegas, Nevada

- Development of immunochemical methods for monitoring environmental contaminants: sample preparation techniques, new immunoassay formats, portable assay kits
- Use of remote sensing digital imagery in conjunction with geographical information systems (GIS), to delineate, map, and monitor wetlands ecosystems
- Advanced instrumentation for analysis of environmental and biological samples
- Mathematical methods such as statistical approaches (including multivariate techniques and pattern recognition) for the improvement of the assessment of large analytical chemistry data bases
- Free product monitoring in the vadose zone
- Development and application of advanced analytical methods for measurement and monitoring of toxic chemicals at or around hazardous waste sites

Atmospheric Research and Exposure Assessment Laboratory, RTP, North Carolina

- Development of human exposure models to accurately predict exposures to environmental pollutants
- Management and assessment of quality assurance data from large air pollution monitoring programs
- Laboratory simulation of buoyant plume penetration of elevated inversions

Environmental Criteria and Assessment Office, Cincinnati, Ohio

- Statistical problems in the application of probabilistic simulation methods to existing EPA risk assessment models
- Development of models to describe interactions between agents in binary mixture

For detailed instructions and other information, write to:

Alvin Edwards
1989 Visiting Scientists and Engineers Program
Office of Exploratory Research, RD-675
U.S. Environmental Protection Agency
401 M Street, S.W. Room NE306
Washington, D.C. 20460
Phone: (202) 382-7663

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Laboratorios Liade SA is a subsidiary of The Boots Company PLC with modern, well-equipped laboratories in the Madrid area.

An experienced Research Scientist is required to lead and direct a 25 strong research department which is focusing primarily on the discovery and development of new drugs for the treatment of epilepsy. You will report to the local Scientific Director, but for corporate project purposes will work closely with the Mental Illness Project Leader in the UK.

You must have a PhD and an established research record in the pharmacology or biochemistry of the central nervous system. Experience in industry is required. The ability to communicate effectively with non-specialists is essential.

Salary is negotiable and generous assistance will be given with the cost of relocation to Spain.

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POSITIONS OPEN

FACULTY POSITION IN MOLECULAR GENETICS OPPORTUNITY FOR COLLABORATION IN GENE THERAPY RESEARCH

The University of Pennsylvania School of Veterinary Medicine invites applications for a full-time tenure-track appointment as assistant/associate professor of molecular genetics. Interested applicants should have significant research experience in an area of molecular genetics relevant to the study of basic mechanisms in genetic diseases. The individual chosen will be expected to develop his/her own independent program of research and to participate in an expanding program of graduate and postdoctoral training in genetics within the school and university. A major activity in the School is a well-supported program of gene therapy research, and preference will be given to applicants who have an interest and experience in the identification, mapping, cloning, and characterization of genes involved in disease. Faculty members already working collaboratively in an active Gene Therapy Research Group include scientists specializing in the genetics, pathology, and biochemistry of genetic diseases, cell and tissue transplantation, and the use of retroviral vectors for correction of genetic diseases by gene transfer. Strong ties exist with the Department of Human Genetics and other departments within the University involved in graduate education and research in molecular biology and genetics.

Candidates should submit curriculum vitae and the names and addresses of three references to: **Dr. Donald F. Patterson, Chair, Search Committee, Section of Medical Genetics, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, PA 19104-6048.**

The University of Pennsylvania is an Equal Employment/Affirmative Action Employer.

FACULTY POSITIONS SLOAN-KETTERING INSTITUTE CELL BIOLOGY AND GENETICS PROGRAM

The Sloan-Kettering Institute invites applications for several tenure-track junior and senior faculty positions in the cell biology and genetics program. This research program is one of four in the Institute, and is undergoing a major expansion in research at the molecular level on the areas of positive and negative growth control, differentiation, cell structure, intercellular recognition, and morphogenic pattern formation. The Cell Biology Program and the Molecular Biology Program at the Sloan-Kettering Institute are jointly relocating to a new research building which also houses advanced facilities for protein and nucleic acid microchemistry, transgenic mice, and automated mammalian cell micromanipulation. The faculty members of the Cell Biology and Genetics Program are also affiliated as faculty with the Cell Biology Graduate Program at Cornell University Medical School. The positions offered are highly competitive with regard to start-up funds, laboratory space, salary, and housing.

Eligible candidates should have a doctoral degree, postdoctoral experience, and demonstrate potential and ability to develop an independent, imaginative research program. Formal applications are invited from junior as well as established investigators. Applications should include curriculum vitae, a list of publications, a summary of research activities and research plan, and the names of three or more references. Applications should be addressed to: **Dr. Joan Massagué, Cell Biology and Genetics Program, Sloan-Kettering Institute, 1275 York Avenue, New York, NY 10021.**

FACULTY POSITIONS IN PHYSIOLOGY—TULANE

Applications are invited for tenure-track appointments at all ranks. Candidates should hold the Ph.D. or M.D. degree, have a record of excellence in research, and be committed to teaching of medical and graduate students. Research areas marked for expansion include, but are not limited to, cardiovascular-renal, cellular/molecular, and membrane transport physiology. Send a résumé, description of research program, reprints, and four letters of recommendation to: **Dr. L. Gabriel Navar, Chairman, Department of Physiology, Tulane University School of Medicine, 1430 Tulane Avenue, New Orleans, LA 70112.** Tulane University is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

FACULTY POSITIONS MOLECULAR BIOPHYSICS AND BIOCHEMISTRY YALE UNIVERSITY

The Department of Molecular Biophysics and Biochemistry seeks applicants for two positions at the level of assistant professor in the general areas of biophysics, biochemistry, and molecular biology. Qualified applicants would be expected to develop an independent research program and to participate in departmental teaching. Candidates should submit curriculum vitae with a summary of present and future research interests, and request that three letters of recommendation be sent no later than 15 February 1989 to: **Dr. William McGinnis, Chairman, Search Committee, Department of Molecular Biophysics and Biochemistry, Yale University, P.O. Box 6666, 260 Whitney Avenue, New Haven, CT 06511.**

Yale is an Equal Opportunity/Affirmative Action Employer and particularly encourages applications from women and minorities.

GENETICIST—Furman University has a September 1989 tenure-track position at the assistant professor level for a person trained in genetics. Teaching responsibilities are introductory genetics and zoology, with later opportunity for participation in other courses in one's area of interest. Candidates must have the Ph.D. degree, a strong interest and ability in teaching undergraduates, and a commitment to involving them in one's active research program. Furman is a very selective liberal arts school of 2500 students. Submit curriculum vitae, original or photostatic transcripts, a statement describing areas of teaching competency and research interests, and arrange to have three letters of reference sent to: **Dr. Rex Kerstetter, Genetics Search Committee, Department of Biology, Furman University, Greenville, SC 29613.** Application deadline is 9 January 1989. *An Equal Opportunity/Affirmative Action Employer.*

GENETICIST—Candidates with postdoctoral experience are invited to apply for a tenure-track position as a geneticist. Candidates will be expected to develop a strong research program that uses molecular biological techniques to address a fundamental problem in genetics, and to participate in teaching introductory genetics. The position will likely be filled at the assistant professor level, possibly higher. Applicants should send curriculum vitae, including a description of future research plans, and have three letters of recommendation sent to:

**Chairperson
Genetics Search Committee
Biology Department
University of Iowa
Iowa City, IA 52242**

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

GENETICS/BIOSTATISTICS: The Department of Biology at the University of Michigan—Flint invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level. The position will begin fall 1989 with primary teaching responsibilities in genetics and biostatistics. Requirements: Ph.D. by September 1989, demonstrated teaching ability, active research record and broad training in biology. Selection review will begin 2 January 1989. Send résumé including coursework and teaching areas, copies of recent publications and a list of at least three references to: **Dr. Gary L. Pace, Department of Biology, University of Michigan—Flint, Flint, MI 48502-2186.** This campus is a 6000-student, urban regional unit of The University of Michigan. A new science building has just been occupied (fall 1988). *The University of Michigan—Flint is a non-discriminatory, Affirmative Action Employer, which specifically invites women and minorities to apply.*

MEDICAL ONCOLOGIST. Full-time for clinical oncology, teaching, and research (clinical and/or basic science). Available January 1989. Must fulfill criteria for faculty appointment at Texas Tech University School of Medicine. Send curriculum vitae and three reference letters to: **Stephen E. Wright, M.D., Medical Service (111), VA Medical Center, Amarillo, TX 79106-1797.** *Equal Employment Opportunity Employer.*

POSITIONS OPEN

HEMATOPATHOLOGIST

Junior staff position in hematology/blood bank is available now in Laboratory Service, West Los Angeles VA Medical Center. Qualifications include an M.D. degree, certification in clinical or specialty pathology or equivalent experience, interest in teaching, demonstrated research ability and potential for development of an independent research program, administrative skills in developing and managing computerized laboratories to fulfill current requirements. Application with curriculum vitae, names, and addresses of four references should be sent to: **U. Tomiyasu, M.D., Chairperson, Search Committee for Hematopathology/Blood Bank, Laboratory Service 691/113, West Los Angeles VA Medical Center, Los Angeles, CA 90073.** *Veterans Administration is an Equal Opportunity/Affirmative Action Employer. U.S. Citizenship is required.*

INORGANIC CHEMISTRY AND ANALYTICAL BIOCHEMISTRY—The Chemistry Department of Williams College invites applications for two tenure-track positions at the **ASSISTANT PROFESSOR** level for fall 1989. Candidates should have a Ph.D. (postdoctoral experience is preferred) and a strong commitment to teaching at the undergraduate level and developing a productive research program. The teaching assignments for the inorganic chemist will include inorganic chemistry and physical chemistry and for the biochemist will include biochemistry and instrumental methods of analysis. Additional assignments for both will be from other courses in the curriculum consistent with the individual's background and interests and the needs of the Department. A semester teaching load normally includes complete responsibility for one course including the laboratory, and supervision of student research projects. Authorization for one position has been granted and authorization for the second is pending. Appointment at a senior level is possible under special circumstances. Williams College is a highly selective, coeducation liberal arts institution of approximately 260 faculty and 1950 undergraduates, located in northwestern Massachusetts. The Chemistry Department, with nine faculty members and 25 to 35 majors each year, is accredited by the ACS and has excellent facilities for teaching and research. Send résumé, undergraduate and graduate transcripts, description of research projects for undergraduates, and three letters of recommendation to: **Dr. Lawrence J. Kaplan, Chairman, Department of Chemistry, Williams College, Williamstown, MA 01267,** by 30 December 1988. *Equal Opportunity/Affirmative Action Employer. We are especially interested in identifying minority and women candidates.*

MICROBIOLOGIST—The Department of Biology of the University of North Carolina at Greensboro (UNCG) has a 9-month tenure-track position for an assistant professor of biology to be filled by August 1989. We seek an individual with an earned doctorate to teach microbiology and advanced courses at the undergraduate and graduate level, and to develop a research program. Applicants should submit, by 10 January 1989, a statement of research and teaching interests, curriculum vitae, representative reprints, a list of science courses completed, and three letters of reference to: **Dr. Robert Cannon, Search Committee, Department of Biology, UNCG, Greensboro NC 27412-5001.** *An Equal Opportunity/Affirmative Action, Title IX, 504 Employer.*

MOLECULAR VIROLOGY DEPARTMENT OF MICROBIOLOGY UNIVERSITY OF VIRGINIA

Applications are invited for a tenure-track position in molecular virology at the **ASSISTANT OR ASSOCIATE PROFESSOR** level. Position will include joint appointment in the Cancer Center. Candidates will be expected to maintain an active, independent research program, and to engage in limited teaching of graduate and medical students. The department offers a stimulating environment, including well-equipped facilities, and well-funded graduate and postdoctoral training programs. Applicants should submit curriculum vitae, a statement of current research activities and future plans, and the names of three people from whom letters of recommendation can be requested to: **Dr. Robert R. Wagner, Chairman, Department of Microbiology, University of Virginia School of Medicine, Box 441, Charlottesville, VA 22908.**

An Equal Opportunity/Affirmative Action Employer

**THE HONG KONG UNIVERSITY OF
SCIENCE AND TECHNOLOGY**
seek candidates for

**Heads/Professors of
Academic Departments**

Vice-Chancellor: Professor Chia-Wei Woo

The Hong Kong University of Science and Technology was established in April 1988. Its mission is to educate men and women who will contribute to the territory's economic well-being, and to promote research, development, and entrepreneurship in the Asian-Pacific region.

Student intake will begin in 1991-92, at both undergraduate and postgraduate levels including the doctorate. Enrollment is expected to grow to 7,000 FTE within 5 years, and possibly to 10,000 by 1998-99. Student/staff ratio will begin at 7 to 1, leveling off to 11 to 1 in the steady state. While students are expected to be bilingual, all professional instruction will be offered in English.

The University will set up a research centre, a number of research institutes, and a technology transfer centre, the latter in the form of a limited corporation, to facilitate collaboration among members of different Departments, as well as partnership between members of the University and industry and commerce. Major efforts will be directed toward biotechnology; advanced materials; CAD/CAM; mathematics and statistics for applications to engineering, manufacturing, and finance; risk management and environmental studies; etc.

SCHOOL OF SCIENCE

DEPARTMENT OF BIOLOGY

The Department will provide undergraduate education in a wide range of biological sciences that cover biological systems at all levels of organization. It will also offer postgraduate education for in-depth study and research into major areas of modern biology: animal physiology, biochemistry, biophysics, cell biology, developmental biology, ecology, population genetics and evolution, molecular genetics, microbiology, neurobiology and plant physiology. There will be strong emphases on all aspects of biotechnology that meet Hong Kong's economic development needs. Student population is expected to grow to 400 FTE by 1996-97. The Department will have an academic staff establishment of 40 by 1996-97, and appropriate administrative and technical staff as well-equipped laboratories. A Department of Biochemistry with about 30 staff and 300 student FTE will be established a year after the inauguration of the Department of Biology.

QUALIFICATIONS AND EXPERIENCE

In general, applicants should have appropriate high academic and/or professional qualifications together with successful, relevant experience in universities, research laboratories, and/or industry. The successful candidates for the posts of Departmental Head will also be required to demonstrate the personal qualities necessary to lead the department in its diverse functions and to interact strongly with industry and commerce.

SALARY AND FRINGE BENEFITS

The salary will be within the professorial range, averaging HK\$45,820 per month (not less than HK\$37,045 per month), corresponding to approximately \$70,492 per annum (and approximately \$56,992 per annum) at the current exchange rate of HK\$7.8 = US\$1.0. Excellent fringe benefits including medical and dental benefits, annual leave, air passages, and children's education allowances are provided. Housing or tenancy allowances are also provided at a charge of 7.5% of salary. A gratuity of an amount equal to 25% of the basic salary drawn will be payable upon successful completion of contract. When a superannuation scheme is introduced, eligible staff will be given an option to join the scheme. Sabbatical leave, if approved, will be at full salary.

APPLICATIONS

Applications providing a detailed curriculum vitae together with the names and addresses of three referees should be sent to the Acting Pro-Vice-Chancellor (Administration and Business), The Hong-Kong University of Science and Technology, 8/F, St. John's Building, 33 Garden Road, Hong Kong. Applicants should also send a copy of their application to the Appointments Officer, The Association of Commonwealth Universities, 36 Gordon Square, London WC1H 0PF. Application forms and further information are obtainable from these two offices. Full consideration will be given to applications received before 13 January 1989, but the search will continue until suitable appointments are made.

**Director-Center for Great
Lakes and Aquatic Sciences**
The University of Michigan, Ann Arbor

The University of Michigan is searching for a Director for the Center for Great Lakes and Aquatic Sciences (CGLAS). The Center is the locus of a broad variety of research efforts both on the Laurentian Great Lakes and on other aquatic systems worldwide. CGLAS is an independent research unit within the University's College of Literature, Science, and the Arts and has substantial facilities including laboratories, libraries, and an 80-foot UNOLS research vessel. Forty persons are affiliated with the Center, including 14 primary and associated researchers, and an administrative staff of 5. The Director will be responsible for the overall research directions and growth of the Center, and will represent CGLAS and the University at local, state, national, and international levels. Ann Arbor is the location of several state and federal research laboratories that focus on the Great Lakes in addition to the University programs. Appointment to the Directorship will be on a half-time basis and will be made in conjunction with an appointment as a tenured associate or full professor in the appropriate university department.

We are searching for an outstanding aquatic scientist who has a strong record of external funding and is familiar with the agencies that fund aquatic science, is capable of enhancing a program based on external funding, and, preferably, has some administrative experience. The successful candidate should hold a Ph.D. degree and must demonstrate a record of scholarship that will qualify for a tenured position in the University's College of Literature, Science, and the Arts.

Applications and nominations will be accepted until February 15, 1989, although the search will remain open if suitable candidates are not found by then. Interested persons should submit curriculum vitae and the names of five persons who can be contacted as references to: **Prof. David K. Rea, Chair, Director Search Committee, Center for Great Lakes and Aquatic Sciences, The University of Michigan, 2200 Bonisteel Boulevard, Ann Arbor, Michigan 48109-2099.**



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**SENIOR
INFORMATION
SCIENTIST**

A

s one of the world's largest and most prestigious pharmaceutical and medical research organizations, Hoffmann-La Roche understands the importance of an effective Scientific Information Services Department.

To maintain our high level of excellence in this function, we are seeking an individual to conduct literature searches and write critical reviews; initiate and prepare evaluative literature surveys in the biochemical and biomedical fields; maintain comprehensive bibliographies on Roche products; and abstract/index scientific articles and patents in English and other languages.

To qualify, you must possess a PhD in a Biomedical Science, with emphasis on biochemical therapeutics and molecular biology. In addition, laboratory research experience and the proven ability to write in-depth literature reviews are essential. Reading ability in German and French, course work in Organic Chemistry and knowledge of commercially available data bases are desirable.

In return, we offer a very competitive salary, an attractive benefits program, and the professional satisfaction of supporting an organization with a strong commitment to health. For consideration, please send your resume with salary history/requirements (those without this information will not be acknowledged), to: **Mr. John G. Nathan, Department L.C., Hoffmann-La Roche Inc., Nutley, New Jersey 07110.** We are an equal opportunity employer.

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POSITIONS OPEN

MARINE SCIENTIST C #060

Will serve as database manager and design, develop and maintain comprehensive fisheries data storage and retrieval system. Advanced degree in computer science or fisheries or marine science or equivalent combination of experience and training required. Demonstrated ability in database management required. Ability to conduct independent research and strong communication skills required. Familiarity with major software packages required. Demonstrated knowledge of fisheries or aquatic ecology preferred. Application must be received not later than 16 December 1988 in: **The Office of Personnel Services, College of William and Mary, Thienes House, Williamsburg, VA 23185.** An Equal Opportunity/Affirmative Action Employer.

MICROBIOLOGIST, Ph.D., ASSISTANT PROFESSOR. Responsibilities include teaching the broad spectrum of medical school microbiology and research. Interested qualified candidates send curriculum vitae, statement of research interests, teaching experience, research background, statement of prior and current funding, and the names of three references to: **Ms. Gloria Semente, Special Projects, New York College of Osteopathic Medicine, Old Westbury, NY 11568.**

MOLECULAR BIOLOGY TWO FACULTY POSITIONS

The Department of Biological Sciences at the State University of New York at Albany seeks to fill two tenure-track positions in molecular biology at the assistant or associate professor level. Candidates with research interests in (i) the use of molecular genetic techniques to study protein and/or DNA structure/function relationships, and (ii) molecular aspects of eukaryotic gene expression in developmental, neuro-, or cell biology, are encouraged to apply. Applicants should submit curriculum vitae, a summary of research interests, and three reference letters before 31 January 1989 to:

**Chair, Molecular Biology Search Committee
Department of Biological Sciences
State University of New York at Albany
1400 Washington Avenue,
Albany, NY 12222.**

The department has strong Ph.D. programs in molecular biology, cell and developmental biology, neurobiology, and ecology, and participates in an interdepartmental Center for Molecular Genetics.

SUNY at Albany is an Equal Opportunity/Affirmative Action Employer. Applications from women, minority persons, handicapped persons, and special disabled or Vietnam veterans are especially welcome.

MOLECULAR/GENETICS INDIANA UNIVERSITY, NEW ALBANY

Natural Sciences (biology) at Indiana University Southeast seeks qualified Ph.D. applicants with a molecular biology/genetics specialty for a tenure-track position as **ASSISTANT PROFESSOR.** The person selected is expected to reinforce our commitment to excellence in undergraduate teaching. Teaching responsibilities include molecular biology, genetics, and cell biology, and developing laboratories in each. Additional teaching responsibilities may include other major/non-major courses.

Candidates must also demonstrate strong potential for independent research, and will be expected to apply for extramural research funding. Space will be provided for a teaching/research laboratory. Start-up equipment and some continuing support for research will be available.

Submit three letters of reference, curriculum vitae, research statement with a description of projected future research activities, and official transcripts to:

**Dr. C. M. Christenson
Molecular/Genetics Search Committee
Division of Natural Sciences
Indiana University Southeast
4201 Grant Line Road
New Albany, IN 47150**

Indiana University is an Affirmative Action/Equal Opportunity Employer. The search committee will begin screening of applications on 1 February 1989 and will continue until the position is filled.

POSITIONS OPEN

MOLECULAR BIOLOGIST

ASSISTANT PROFESSOR: TENURE-TRACK: to begin September 1989 subject to availability of funds. Ph.D., postdoctoral experience and record of publications indicating ability to establish an active, independent research program are required. Research should focus on developmental molecular genetics in plants, *Drosophila* or yeast, and complement interests of molecular biologists currently on faculty. Plant virologists experienced in use of plant viruses or T1 plasmids as vectors for study of gene expression in plants are particularly encouraged to apply. Teaching assignments in graduate biotech/biomed program and undergraduate curriculum. Applications received by 9 January 1989 will receive priority consideration. Send curriculum vitae, description of research, and three references to:

**Professor Richard H. White, Chair
Search Committee
Biology Department
College of Arts and Sciences
University of Massachusetts Boston
Harbor Campus
Boston, MA 02125-3393**

An Affirmative Action/Equal Opportunity/Title IX Employer.

MOLECULAR BIOLOGIST POSITION AVAILABLE

The Department of Physiology of the University of Maryland School of Medicine invites applications for a tenure-track position at the assistant professor level. We seek candidates with training in molecular biology as applied to neurobiology, membrane biology, endocrinology, or growth factors. Applicants must have a Ph.D. or M.D., at least 2 years of postdoctoral experience and the potential to develop a strong and independent research program. The Department of Physiology, the Medical School and the Medical Biotechnology Center provide a stimulating environment for research with ample opportunities to interact with other faculty members. Send curriculum vitae, statement of research interests, reprints of key publications, and names of three references by 1 February 1989 to:

**Phyllis M. Wise, Ph.D., Chair
Molecular Biology Search Committee
Department of Physiology
University of Maryland School of Medicine
655 West Baltimore Street
Baltimore, MD 21201**

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

NEUROSCIENTIST/ COMPUTER SCIENTIST/BIOLOGIST

Individual with background in neurosciences, computer graphics/image processing, and/or optical recording techniques to manage and direct computer and imaging resource for large multidisciplinary neuroscience research laboratory. Own research encouraged. Please send curriculum vitae and bibliography to: **D. J. Reis/K. Koenig, Division of Neurobiology, Cornell University Medical College, 411 East 69th Street - KB410, New York, NY 10021.** Equal Opportunity Employer/Affirmative Action M/F/H/V.

PHARMACEUTICS/PHARMACEUTICAL CHEMISTRY

Applications are invited for a **TENURED OR TENURABLE POSITION** in pharmaceuticals/pharmaceutical chemistry at the University of Colorado School of Pharmacy. The position requires a Ph.D. in pharmaceuticals, pharmaceutical chemistry, chemistry, chemical engineering, or closely-related field. The successful applicant will be expected to develop a strong extramurally-funded research program in his/her area of interest. Other responsibilities include teaching pharmaceuticals and/or pharmaceutical chemistry at the undergraduate and graduate levels. Candidates at all ranks will be considered. Salary and rank will be commensurate with qualifications and experience. The closing date for receipt of applications is 15 January 1989. Submit curriculum vitae, a brief description of research plans, and the names, addresses, and telephone numbers of three references to: **Dean Louis Diamond, School of Pharmacy, University of Colorado, Boulder, CO 80309-0297.** The University of Colorado is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

NEUROANATOMIST—MIAMI UNIVERSITY

Assistant Professor, tenure-track appointment, effective August 1989. Ph.D. is required; postdoctoral experience is desirable. We seek applicants who are well-trained in the anatomy of the mammalian brain, primarily employ modern electron microscopical techniques in their research, can effectively teach neuroanatomy, histology and introductory physiology, and can conduct a productive research program. The Department offers B.S., M.S. and Ph.D. programs, and is housed in new, well-equipped facilities. By 11 January 1989, send a résumé, three letters of recommendation, brief description of research and teaching interests, and transcripts of all academic work to: **R. G. Sherman, Zoology, Miami University, Oxford, OH 45056.** Minorities and women are strongly encouraged to apply. Miami University is making every effort to create a diverse, heterogeneous faculty and staff.

PHARMACOLOGIST

Applications are invited for a full-time faculty position available July 1989 comprising both teaching and research opportunities. Candidates should have a Ph.D. in pharmacology. Expertise in physiology desirable. Candidates should possess a strong commitment to teaching and have demonstrated excellence in research. Send curriculum vitae to: **Douglas H. Poorman, Ph.D., Vice President of Academic Affairs, Southern College of Optometry, 1245 Madison Avenue, Memphis, TN 38104.** Equal Opportunity Employer.

PHARMACOLOGY—Tufts University School of Medicine and School of Veterinary Medicine. The Department of Pharmacology invites applications for a tenure-track position at the level of **ASSISTANT OR ASSOCIATE PROFESSOR.** Candidates are sought with research expertise in areas of biochemical or molecular pharmacology such as drug metabolism, cellular transport, or the mechanism of action of cytotoxic agents. The successful applicant will be expected to develop an independent research program with outside funding. The responsibilities of the position include directing a basic veterinary pharmacology course, and taking part in the teaching of other pharmacology courses. Please submit a résumé and concise statement of research interests, and arrange for three letters of recommendation to be sent to: **Faculty Search Committee, Department of Pharmacology, Tufts University School of Medicine, 136 Harrison Avenue, Boston, MA 02111.** Tufts University is an Affirmative Action/Equal Opportunity Employer.

PLANT MOLECULAR BIOLOGY

One **POSTDOCTORAL POSITION** available in January 1989 for mutational analysis of cereal genes in transgenic rice plants. A Ph.D. in molecular biology, biochemistry or genetics. Experiences in recombinant DNA work essential. Salary \$24,000 per year. Send résumé to: **Dr. Norimoto Murai, Department of Plant Pathology and Crop Physiology, Louisiana State University, Baton Rouge, LA 70803.** Telephone: 504-388-1380.

An Equal Opportunity Employer.

PLANT TISSUE CULTURE/ GENETIC ENGINEERING

Tenure-track appointment available 15 March 1989 at the **ASSISTANT OR ASSOCIATE PROFESSOR** level to conduct research aimed at developing strategies to bridge cellular and molecular approaches to plant improvement using tissue/cell culture, protoplast fusion, haploid culture, and/or genetic engineering techniques. Program development is expected to follow interests of the successful candidate, and basic as well as applied investigations will be encouraged. Teaching a graduate level course, collaboration with other investigators who wish to utilize tissue culture techniques in plant breeding and micropropagation, and advising graduate students will be encouraged. Applicants must have a Ph.D. with emphasis in plant physiology and biochemistry. Deadline for receipt of application is 15 February 1989 or until a suitable candidate is located. Interested persons should send curriculum vitae, transcripts, and have three letters of reference forwarded to: **William J. Blackmon, Department of Horticulture, 137 Julian C. Miller Hall, Louisiana State University, Baton Rouge, LA 70803.** Louisiana State University is an Equal Opportunity/Affirmative Action Employer.

MAKE AN IMPACT

Applied Biosystems Incorporated, the leading international manufacturer of instrument/reagent systems for biotechnology research, is seeking accomplished professionals to be located at our facilities in the San Francisco Bay Area.

ASSOCIATE SCIENTIST

Use your expertise in molecular biology and biochemistry to support R&D for our DNA sequencer project. This will involve developing new approaches and applications for fluorescent dye-labelled DNA sequencing. To qualify, you'll need a strong background in DNA sequencing and/or DNA polymerases with a PhD in a related field or a BS/MS with 2-5 years of relevant experience. (Ref. #88-340)

ASSOCIATE SCIENTIST

Your primary focus will be to develop novel, automatable chemistries. You'll investigate new chemical methodologies for the analysis of peptides and proteins, design and run new reactions and characterize the reaction products. We require a BS/MS in Organic Chemistry with 1-5 years laboratory experience and strong knowledge of HPLC. Excellent analytical and synthetic skills essential. (Ref. #88-226)

ASSOCIATE SCIENTIST

You'll develop methodology and applications for protein sequencing instrumentation, help design hardware and software for the product line and participate in user training and user meetings. To qualify, you'll need a BS in Chemistry or Biochemistry with 1+ years experience operating and maintaining protein sequencers. We also require expertise in preparing protein/peptide samples for sequence analysis, applications protocol development, and methods troubleshooting. Excellent communication skills essential. MS preferred. (Ref. #88-289)

RESEARCH ASSOCIATE

You will conduct automated synthesis, purification, and analysis of oligonucleotide analogues and assist in the development of related new methodologies. You'll need to be a self starter with demonstrated initiative. A BS in Chemistry and 2-4 years of related experience are also required. (Ref. #88-251)

Make an impact at Applied Biosystems. Qualified candidates may send their resumes, indicating the reference code, to Human Resources, Applied Biosystems Incorporated, 850 Lincoln Centre Drive, Foster City, CA 94404. We are an equal opportunity employer.



MOLECULAR BIOLOGY

Advance your career ON THE CUTTING EDGE of AGRICULTURAL BIOTECHNOLOGY

Crop Genetics International, a leading agricultural biotechnology company located in Maryland close to Washington D.C. and Baltimore, is expanding its efforts in bacterial molecular biology to develop novel delivery systems for microbial biopesticides. We are seeking talented and energetic individuals who will contribute to our new applications of molecular biology. With excellent laboratory facilities and scientific staff, the company provides an ideal environment in which successful candidates will pursue answers to challenging questions concerning regulation of gene expression in novel, non-conventional bacteria. We are seeking the best scientists for advancing our proprietary technology to improve crop protection. The efforts of our molecular biology team have a direct effect on increasing the world's food supply while decreasing the environmental impact of widely used chemical pesticides. The specific positions being filled include the following:

Senior Scientists - Ph.D. in Molecular Biology, Microbiology or Biochemistry. A minimum of five years experience in the biotechnology industry, with proven expertise in cloning and gene expression. The Senior Scientist will organize and manage his/her scientific group, establish financial requirements and report to the Department Director.

Research Scientists - Ph.D in Molecular Biology, Microbiology or Biochemistry. Scientists with recombinant DNA technology skills will have academic and/or industrial experience in gene cloning and expression, preferably but not necessarily in non-model systems. A fundamental understanding of gene regulation and bacterial physiology is necessary. Scientists with protein biochemistry skills should have academic and/or industrial experience in protein purification and characterization.

Associate Scientists - A Masters degree or equivalent experience in Molecular Biology, Microbiology or Biochemistry with a minimum of one year of biotechnology experience; or a bachelor's degree in an appropriate field with three years of relevant molecular biology experience. Successful candidates must have skills in recombinant DNA technology and/or protein biochemistry; immunochemical experience is desirable.

Successful candidates will be offered attractive compensation commensurate with qualification, generous benefits and excellent opportunity for interaction with leading scientists in the academic community. Resumes with the names of 3 references should be forwarded to the Vice President for Research & Development.



Crop Genetics International

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RESEARCH ASSOCIATE

Kaiser Permanente in Los Angeles has an excellent career opportunity available in our Research Laboratory.

Qualified candidates will have experience in cellular immunology/immunochimistry including cell culture techniques, immunofluorescence, leukocyte function and RIA. Good verbal and written communication skills, the ability to work with minimal supervision and an advanced degree in a related area are also required. Previous research publication record is preferred.

As part of one of the nation's oldest, largest and leading health care organizations, we offer competitive salaries and a comprehensive benefits package.

Qualified candidates should submit resumes to: **Kaiser Permanente, Personnel Department J0U-097-12/88, 1515 N. Vermont Ave., 2nd Floor, Los Angeles, CA 90027.** Equal Opportunity Employer.



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SCIENTIFIC EXCHANGES

NAS Scientific Exchange Program 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 January 1, 1990 through December 31, 1990 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 one month in one country.

Applicants must be U.S. citizens and have a doctoral degree or its equivalent by June 1989 in physics; chemistry; mathematics and computer sciences; earth, atmospheric, and oceanographic sciences; agricultural, forestry, fishery, and plant sciences; biological sciences; environmental sciences; engineering; archaeology and anthropology; geography; or psychology. Also included are science and technology policy and those aspects of the economic and social sciences that involve quantitative analysis as a primary consideration. 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 five months.

Requests for applications should reach the National Academy of Sciences not later than February 14, 1989. Applications must be postmarked by February 28, 1989. Address application requests to:

**National Academy of Sciences
Office of International Affairs
Soviet and East European Affairs (HA-166)
2101 Constitution Avenue, NW
Washington, D.C. 20418
Telephone: (202) 334-2644**

RESEARCH FELLOWSHIPS IN NUTRITION FOR MEDICAL STUDENTS THE ROCKEFELLER UNIVERSITY

A program for one year research fellowships has been made available by the Pew Charitable Trusts. Medical students will be selected to join the Pew Center of Nutritional Excellence at Rockefeller University in New York City. The core activity of fellows will be investigative work in basic biomedical laboratories at Rockefeller University on projects relevant to human nutrition. Applicants should currently be in the junior year of any medical school in the U.S.A. A generous stipend and housing allowance will be offered to those selected for the fellowship year to begin July 1, 1989.

Applications must be completed no later than February 1, 1989 to allow for full consideration. A small number of applicants will be invited to New York City for interviews in March, 1989 and final selection will be made early in April. For application forms and further details write to:

**Dr. Jules Hirsch
The Rockefeller University
1230 York Avenue
New York, New York 10021-6399**

BIOCHEMIST

Merck Sharp & Dohme Research Laboratories, a world leader in the development of ethical pharmaceuticals for human health, has an opening in a multidisciplinary project investigating the biochemistry, molecular biology and *in vivo* role of novel immunosuppressive agents.

The position will require proficiency in standard protein biochemistry techniques. A background and working knowledge of molecular biology is desirable. Qualified applicants should have a B.S. or M.S. degree or equivalent with at least three years of experience.

Merck Sharp & Dohme Research Laboratories are located in Rahway, New Jersey, approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent.

Interested candidates should submit their resumes with the names of three references and salary requirements to **Ms. Lonnie Deetz, Merck & Co., Inc., P.O. Box 2000, Rahway, New Jersey 07065.**

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FACULTY RESEARCH PARTICIPATION (FRP)

Argonne National Laboratory, a major U.S. Department of Energy research and development center for peacetime energy, invites applications to its summer research participation program for college and university faculty. Additional resources have been made available for support of collaboration in any of our basic research programs in Biology; Chemistry; Mathematics; Computer Science; Materials Science; Neutron, Atomic, High Energy, Reactor and Nuclear Physics; Chemical Technology; Reactor Safety; Environmental Science and Engineering. Stipends are \$650/week for Assistant Professors and \$750/week for those of higher rank. Eligible are faculty from U.S. colleges and universities.

Additional information on the FRP program as well as our semester program for students and our sabbatical program for faculty can be obtained from:



**Faculty Programs
Division of
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Project Director, Living Organ Equivalent Program

Candidates must have a Ph.D or M.D. degree with a proven record of scientific achievement and industrial experience. The person will be required to coordinate a multi-disciplinary program and have a strong scientific background in dermatology and connective tissue cell biology. At least 5 years of product development work in a senior capacity in industry is needed. A fine package of salary-bonus-options will be provided by a company that already has an exceptional start and a unique technology.

Please send resumes with references to: Human Resources, Organogenesis Inc., 83 Rogers Street, Cambridge, MA 02142

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Organogenesis, Inc.

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NATIONAL INSTITUTE OF
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NORTH CAROLINA

STAFF FELLOW VACANCY

(Less than 3 years postdoctoral
research experience)
(Salary Range \$20,000 to \$38,753)

OR

SENIOR STAFF FELLOW VACANCY

(3-7 years postdoctoral research
experience)
(Salary Range \$24,000 to \$43,452)

A position is available in the Nuclear Magnetic Resonance Workgroup of the Laboratory of Molecular Biophysics, Division of Intramural Research, NIEHS, for an individual interested in participating in magnetic resonance imaging and localized *in vivo* spectroscopic studies. Studies of small experimental animals will be conducted to determine the effects of environmentally significant chemicals and heavy metals on anatomy and metabolism, with a General Electric 4.7 Tesla Chemical Shift Imager (CSI) and high resolution spectrometers operating at 360 and 500 MHz (proton resonance frequency) available. The initial appointment is for two years, with extensions possible for talented researcher. Applicants must possess a Ph. D. or equivalent degree in Physics, Chemistry, Physiology or closely related field and a demonstrated record of achievement in the area of magnetic resonance imaging and/or the use of gradients to obtain localized spectra. Salary commensurate with candidate's background. Must be U.S. Citizen or a permanent resident eligible for U.S. citizenship within four years from appointment.

For additional information, contact Dr. Robert London at 919-541-4879. To apply, submit curriculum vitae and the names of three references by December 28, 1988 to:

Bruce Wiggins (Code HNV2K)
NIEHS Personnel Office
P.O. Box 12233
Research Triangle Park, NC 27709

NIH IS AN EQUAL OPPORTUNITY
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NATIONAL UNIVERSITY OF SINGAPORE DEPARTMENT OF BOTANY

Applications are invited for teaching appointments in the Department of Botany.

Candidates should have a PhD degree and who are trained in one or more of the following areas in *plant sciences*: molecular biology, biotechnology, recombinant DNA-technology, gene transfer systems, molecular genetics, biochemistry, physiology, developmental botany, morphogenesis, tropical ecology and mycology/plant pathology.

Gross annual emoluments range as follows:

Lecturer	S\$44,870 – 58,680
Senior Lecturer	S\$53,160 – 94,090
Associate Professor	S\$82,430 – 113,530

(US\$1.00 = S\$2.03 approximately)

The commencing salary will depend on the candidate's qualifications, experience and the level of appointment offered.

Leave and medical benefits will be provided. Depending on the type of contract offered, other benefits may include: provident fund benefits or an end-of-contract gratuity, a settling-in allowance of S\$1,000 or S\$2,000, subsidized housing at nominal rentals ranging from S\$100 to S\$216 p.m., education allowance for up to three children subject to a maximum of S\$10,000 per annum per child, passage assistance and baggage allowance for the transportation of personal effects to Singapore. Staff members may undertake consultation work, subject to the approval of the University, and retain consultation fees up to a maximum of 60% of their gross annual emoluments in a calendar year.

The Department of Botany is a department in the Faculty of Science. There are 8 faculties in the National University of Singapore with a current student enrollment of some 14,000. The Department is well-equipped with a wide range of facilities to enhance the teaching and research activities of staff members. The University is linked to BITNET, an international network that interconnects almost 500 mainframe computers at 200 institutions of higher learning and research centres around the world.

Application forms and further information on terms and conditions of service may be obtained from:

**The Director
Personnel Department
National University of Singapore
10 Kent Ridge Crescent
Singapore 0511**

**The Director
North America Office
National University of Singapore
780 Third Avenue, Suite 2403
New York, NY 10017, U.S.A.
Tel: (212) 751-0331**

Enquiries may also be sent through BITNET to: **PERSDEPT @ NUSVM**

Opportunities in Molecular Genetics

As part of our expanding research activities, we seek several innovative scientists to join our Molecular Genetics Department at our Central Research Facilities in Groton, Connecticut. These positions offer an opportunity to join a group of highly motivated researchers developing biotechnology applications for the advancement of our drug discovery and medicinal research programs.

Research Scientist-You must have a PhD in Molecular Biology or related field with at least two years postdoctoral experience. Strong scientific credentials and a documented record of productivity are essential. In addition, candidates should have experience in one or more of the following areas:

- mammalian tissue culture and molecular biology techniques
- molecular cloning and DNA sequencing
- construction of prokaryotic and eukaryotic expression vectors
- analysis of heterologous gene expression

Assistant Scientist-Candidates should possess a BS or MS in Microbiology or related discipline and relevant laboratory experience involving recombinant DNA techniques.

In addition to a stimulating scientific environment, we offer a competitive compensation/benefit package and relocation assistance to an attractive south-eastern Connecticut shore community. Qualified applicants should submit their resume and names of three references, indicating position of interest, in confidence, to: Jerry K. Larson, PhD, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340. Please make reference to "Science B" in your application. An equal opportunity employer.



POSITIONS OPEN

PHOTOSYNTHESIS FACULTY POSITIONS ARIZONA STATE UNIVERSITY

The Department of Botany at Arizona State University (ASU) seeks a plant biochemist and a plant molecular biologist to fill two new, tenure-track faculty positions, pending final budgetary approval. These positions will strengthen research efforts in the newly established ASU Center for the Study of Early Events in Photosynthesis. A Ph.D. degree is required and postdoctoral experience is preferred. The successful applicants will be released from teaching obligations for up to 3 years, and will be expected to develop vigorous independent research programs. In addition, collaborative projects with other members of the Center will be encouraged. Appointments will be at the assistant professor level.

Preference will be given to individuals with broad experience in various aspects of photosynthesis. Research of the plant biochemist should focus on membrane-protein biochemistry. The interest of the plant molecular biologist should be in the area of protein synthesis, assembly, transport or regulation.

Applicants should submit their curriculum vitae, a statement of research goals, and have three letters of reference sent to: **Wim Vermaas, Search Committee Chair, Department of Botany, Arizona State University, Tempe AZ 85287-1601.**

Review of applications will begin 30 January 1989 and continue until a suitable candidate is selected. ASU is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL: To study peptide-receptor interactions involving G-proteins and laminins using 2D NMR methods. \$21,000 to \$24,000 plus benefits. New Bruker AM 500 spectrometer Ethernetted to a VAX 8550 cluster. Ph.D. and experience in NMR required. Send application letter, résumé, and three reference letters to: **Dr. Edward Dratz, Department of Chemistry, Montana State University, Bozeman, MT 59717.** Twelve-month, renewable position subject to the availability of funds. Screening begins 16 January 1989. MSU is an Equal Opportunity/Affirmative Action Employer.

TRINITY COLLEGE, DUBLIN, AND THE SAINSBURY LABORATORY, NORWICH

POSTDOCTORAL ASSOCIATE to investigate virulence determinants in potato virus X.

A position is available for a postdoctoral associate to work on the above named project. The experimental approach is essentially molecular, involving the creation of directed mutations in the PVX genome and hybrid genomes, incorporating components from different strains of PVX. The appointee will be seconded to Trinity College Dublin from the Sainsbury Laboratory and it is anticipated that he or she will work in Dublin, although it may be necessary to work in Norwich from time to time.

Further details can be obtained from: **Dr. Tony Kavanagh, Department of Genetics, Trinity College, Lincoln Place Gate, Dublin 2, Eire**, who will provide details of the project and the application procedure. The salary will be in £ sterling on the IA scale for British Universities, in the range £9,865 to £15,720 per annum (levels effective 1 March 1988).

POSTDOCTORAL ASSOCIATE HARVARD MEDICAL SCHOOL

Join multidisciplinary team investigating novel immunotherapeutic approaches to cancer treatment involving radio-labeled monoclonal antibodies [see *Science* 240, 1024 (1988)]. Experience in immunology, immunochemistry or radiobiology useful. Salary: \$23,000 to \$30,000 per year. Send curriculum vitae to: **Dr. Roger Macklis, 50 Binney Street, Boston, MA 02115.** Telephone: 617-732-6310. Equal Opportunity Employer.

POSTDOCTORAL FELLOW

Postdoctoral position available immediately at the University of Pennsylvania to study the PDGF-receptor. Familiarity with molecular biological and/or cell biological techniques required. Send curriculum vitae and three references to: **Dr. C. D. Scher, Children's Hospital of Philadelphia, 34th and Civic Center Boulevard, Philadelphia, PA 19104.** Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIP AT THE UNIVERSITY OF MIAMI ROSENSTIEL SCHOOL OF MARINE AND ATMOSPHERIC SCIENCE IN MARINE AND ATMOSPHERIC CHEMISTRY

A postdoctoral fellowship is available for up to 2 years, starting 1 June 1989. Applications are welcome in any facet of research related to marine and atmospheric chemistry. Areas of current research include: global atmospheric transport, including sulfur and nitrogen species; analysis and turnover of trace metals and organics in seawater and sediments; gas phase reaction kinetics; volatile sulfur compounds in atmosphere and oceans; biotransformations of aromatics and sulfur compounds; aqueous and gaseous photochemistry; thermodynamic and kinetic processes in seawater; tracer studies for modeling ocean circulation and mixing processes.

This fellowship could lead to a permanent faculty position.

The Division occupies a new building with excellent laboratory facilities, including laser and fast kinetics instrumentation. We pursue a vigorous field research program and we provide a good environment of cooperation and interaction among the faculty.

Salary: \$26,000. Apply to: **Dr. J. M. Prospero, Chairman, Division of Marine and Atmospheric Chemistry, Rosenstiel School of Marine and Atmospheric Science, University of Miami, 4600 Rickenbacker Causeway, Miami, FL 33149-1098.**

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

POSTDOCTORAL FELLOWSHIPS—The Lineberger Cancer Research Center of the University of North Carolina at Chapel Hill will have openings in 1989 to 1990 for persons completing graduate studies to train with excellent investigators in basic cancer-related research in tumor virology, chemical carcinogenesis, drug development, cancer cell biology and tumor immunology. Training is available in recombinant DNA technology, gene expression, DNA replication, mutagenesis, molecular enzymology, regulation of cellular proliferation, growth factors, immunogenetics, protein phosphorylation, and combined programs. Unique training resources and core facilities housed in the Lineberger Cancer Research Center. *Candidates must be U.S. citizens or permanent residents.* Send for brochure listing faculty and apply with curriculum vitae, three letters of recommendation, a statement of research interests, and graduate school records to: **Director, CB# 7295 Lineberger Cancer Research Center, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599.** UNC's Cancer Research Center is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION

Available immediately for work on redox proteins. The candidate should be familiar with large scale bacterial growth, enzyme purification and characterization. Since this research will be pluridisciplinary the candidate should have basic knowledge in molecular biology, spectrometric methods and computer modeling. However, this remains a position for a microbial enzymologist, provided such a discipline still exists.

Send curriculum vitae and letters of recommendation by 16 December 1988 to:

**Jean LeGall
Professor of Biochemistry
and Microbiology
Department of Biochemistry
The University of Georgia
Athens, GA 30602**

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

POSTDOCTORAL POSITION available to study the structural-functional relationships of an enzyme involved in bacterial chemotaxis. Candidates should have a Ph.D. degree and experience in one or more of the following areas: protein chemistry, molecular biology, HPLC techniques, and protein purification. Applicants should submit curriculum vitae and letters of recommendation to: **Dr. Simon Simms, The City College, Department of Chemistry, 138th Street at Convent Avenue, New York, NY 10031.**

POSITIONS OPEN

POSTDOCTORAL POSITION—A postdoctoral position in organic chemistry is available immediately to conduct research on the use of free radicals in synthetic applications or organic chemistry and in the study of the mechanism of action of vitamin B₁₂. A Ph.D. in organic chemistry is essential, and prior postdoctoral experience is desirable. The title of the position will be research assistant professor of chemistry. Salary will be commensurate with experience. Applicants should submit a résumé and names and addresses of three references to: **Dr. Paul Dowd, Department of Chemistry, University of Pittsburgh, Pittsburgh, PA 15260** by 31 December 1988. The University of Pittsburgh is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION Northwestern University in Chicago, Illinois, for experiments in molecular genetics and embryology. Experience in molecular biology desired. Salary negotiable, competitive and based on level of training. Inquire with curriculum vitae to: **Philip Iannaccone, M.D., Ph.D., Department of Pathology, Northwestern University, 303 East Chicago Avenue, Chicago, IL 60611.**

POSTDOCTORAL POSITION

Opportunity available after 1 January 1989 for Ph.D. or M.D./Ph.D. postdoctoral person to work on molecular mechanism of insulin action. Project concerns the use of polyclonal and monoclonal antibodies to help characterize the composition, location and biologically active region of insulin-sensitive glycopospholipids which give rise to a phospholipid and carbohydrate polar head group which seems to function as a mediator of some of insulin's action. We already have some antibodies in use and numerous monoclonals to characterize. Applicant should have background in biochemistry with knowledge of phospholipid and carbohydrate chemistry as well as ability to develop and characterize antibodies. Send curriculum vitae and names of the references to: **Dr. Leonard Jarett, Department of Pathology and Laboratory Medicine, Hospital University of Pennsylvania, 3400 Spruce Street, Philadelphia, PA 19104.** The Hospital University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION

Postdoctoral position within a multidisciplinary research group for the purification and characterization of enzymes of the chlorophyll biosynthetic pathway. Address curriculum vitae and three letters of recommendation to: **Professor C. A. Rebeiz, University of Illinois, Laboratory of Plant Pigment Biochemistry and Photobiology, 202 ABL, 1302 West Pennsylvania, Urbana, IL 61801.**

POSTDOCTORAL POSITION

The Department of Biology announces a teaching-research postdoctoral position available 1 July 1989. The successful applicant will be expected to teach a one-semester undergraduate course, with the remaining time devoted to research in the laboratory of a faculty sponsor. Applicants' research interests should be in one of the areas of ecological, evolutionary, and organismal biology, microbiology, or plant sciences. Applicants should submit a description of research interests and arrange for three letters of recommendation to be sent to: **Dr. José Bonner, Department of Biology, Indiana University, Bloomington, IN 47405.** Candidates whose applications are received prior to 15 March 1989 will be assured of consideration. Applications from women and minority group members are especially encouraged. Indiana University is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION UNIVERSITY OF MASSACHUSETTS—BOSTON

Immediate opening to study translational regulation in the mouse testis. Background in molecular biology, biochemistry, or monoclonal antibodies. Salary competitive. Send curriculum vitae, a brief description of research experience, copies of publications and names of three references by 2 January 1989 to:

**Dr. Kenneth C. Kleene,
Department of Biology
University of Massachusetts
Boston, MA 02125**

An Affirmative Action/Equal Opportunity/Title IX Employer.

SCIENCE, ENGINEERING, AND DIPLOMACY FELLOWSHIPS

Applications Invited

The American Association for the Advancement of Science (AAAS), in cooperation with the U.S. Agency for International Development (AID) and the Department of State (STATE) is seeking applicants for approximately 12 Science, Engineering, and Diplomacy Fellowships. Fellows will spend 1 year, beginning 1 September 1989, working either in the Bureau of Oceans and International Environmental and Scientific Affairs of the Department of State or in one of several bureaus and offices of the Agency for International Development. Other assignments may also be possible.

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

The Fellows will serve a 1-year appointment at a salary consistent with education level and experience, if possible, but not exceeding the GS-12 level (beginning at about \$34,000). A security clearance process will be initiated after selection. The clearance must be obtained before a selectee can begin work in STATE or AID and the fellowship award is contingent upon the selectee obtaining this clearance.

Deadline for receipt of applications is 15 January 1989. For more information and application details write:

Science, Engineering, and Diplomacy Fellows Program
American Association for the Advancement of Science
1333 H Street, NW, Washington, DC 20005
Telephone: (202) 326-6600

EXECUTIVE BRANCH

SCIENCE AND ENGINEERING FELLOWSHIP

Applications Invited

The American Association for the Advancement of Science (AAAS) invites applications for a 1-year Executive Branch Science and Engineering Fellowship to begin in early September, 1989. The fellowship program provides an opportunity for an accomplished and societally aware postdoctoral to mid-career scientist to participate in and contribute to the public policymaking processes within one of several agencies in the Executive Branch of the Federal government. Placement will be made at an appropriate Federal agency, based upon the agency's needs and the interests and expertise of the Fellow. Included in the fellowship program is an intensive science policy orientation and a year-long seminar series dealing with a wide array of science and technology issues.

Prospective Fellows may apply from any physical, biological, or behavioral science or any field of engineering. Qualified applicants must demonstrate exceptional competence in some area of science or engineering, be flexible, and have some experience and/or a strong interest in applying knowledge toward the solution of societal problems.

The 1989-1990 AAAS Executive Branch Science and Engineering Fellow will receive a stipend of \$30,000; an additional \$2,000 is available for relocation expenses and travel in connection with the program.

Applications must be submitted by 15 January 1989, with the award to be announced about 1 May 1989. For detailed program information and specific application requirements, write:

Executive Branch Science and Engineering Fellowship Program
American Association for the Advancement of Science
1333 H Street, NW, Washington, DC 20005
Telephone: (202) 326-6600

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CONGRESSIONAL SCIENCE AND ENGINEERING FELLOWSHIPS

Applications Invited

The American Association for the Advancement of Science (AAAS) invites applications for two 1-year Congressional Science and Engineering Fellowships it will offer for the period beginning 1 September 1989. The fellowship program provides an opportunity for accomplished and societally aware postdoctoral to mid-career scientists and engineers to participate in and contribute to the public policymaking processes within the Congress. Fellows work as special legislative assistants within the congressional staff system.

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

The 1989-1990 AAAS Congressional Science and Engineering Fellows will receive a stipend of \$30,000; an additional \$2,000 is available for relocation expenses and travel in connection with the program.

The deadline for submission of application materials is 15 January 1989. The award will be announced about 1 May 1989. For detailed information on the program and specific application requirements, write:

Congressional Science and Engineering Fellows Program
American Association for the Advancement of Science
1333 H Street, NW, Washington, DC 20005
Telephone: (202) 326-6600

POSITIONS OPEN

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL RESEARCH SERVICE

POSTDOCTORAL POSITION, available immediately at the Northern Regional Research Center, Peoria, Illinois, to study the molecular biology of linear plasmids in fungi. Applicants must have a Ph.D. and a background in molecular biology and microbiology or biochemistry. Previous experience with nucleic acids is essential. Appointment is for up to 3 years with a starting salary of \$28,852 (GS-11). Moving expense consideration included. Send curriculum vitae with names and telephone numbers of three references to: **Dr. Paul L. Bolen, USDA—Agricultural Research Service, NRRC, 1815 North University Street, Peoria, IL 61604.** Applications in response to this advertisement should be marked 8N043. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available immediately for x-ray diffraction analysis and computer simulation of semisynthetic enzymes. Experience in small or large molecule crystallography required. Send curriculum vitae and names and addresses of three references to: **Dr. Brian F. P. Edwards, Department of Biochemistry, Wayne State University, 540 East Canfield Avenue, Detroit, MI 48201.** *An Equal Opportunity/Affirmative Action Employer.*

CENTER FOR ADVANCED RESEARCH IN BIOTECHNOLOGY (CARB) UNIVERSITY OF MARYLAND POSTDOCTORAL POSITION

To carry out crystallographic studies of β -lactamase. Candidates should have experience in crystallography and keen interest in the structure and function of macromolecules. State-of-the-art equipment is available. Send applications including curriculum vitae and the names and addresses of three referees to: **Dr. Osnat Herzberg, CARB, 9600 Gudelsky Drive, Rockville, MD 20850.**

POSTDOCTORAL POSITION available in protein chemistry to study the structure and function of non-collagenous bone proteins, particularly proteins which contain the vitamin K-dependent Ca^{2+} binding amino acid, V-carboxylglutamic acid. Send curriculum vitae and the names and telephone numbers of three references to: **Dr. Paul A. Price, Department of Biology, B-022, University of California at San Diego, La Jolla, CA 92093.** *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS available in program investigating glial and neuronal responses in CNS/immunodeficiency diseases (**Dr. S. Griffin**) and CNS development and trauma (**Drs. S. A. Gilmore and T. J. Sims**). Applicants should have a recent Ph.D. in molecular biology, neuroscience, or anatomy (electron microscopy). Send inquiries and curriculum vitae to: **Dr. Sue Griffin, University of Arkansas for Medical Science, Department of Pediatrics, 4301 West Markham-512B, Little Rock, AR 72205.** *An Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

POSTDOCTORAL POSITIONS available for participation in a multiple-disciplinary approach to a study of the mechanism and structure of enzymes of polyisoprenoid biosynthesis. The project, sponsored by NSF's Chemistry of Life Sciences Program, will involve techniques in enzymology, microbial genetics, and synthetic and physical organic chemistry. The Departments of Chemistry (**W. W. Epstein and C. D. Poulter**) and Biochemistry (**H. C. Rilling**) at the University of Utah and the Biotechnology Division of Amoco Corporation are participating.

Send research interests, curriculum vitae, and names of three references to: **H. C. Rilling, Department of Biochemistry, University of Utah, Salt Lake City, UT 84132.**

POSTDOCTORAL POSITIONS available immediately for microbial geneticists to join active DNA Repair Group using molecular biological, enzymatic and immunochemical approaches. Good salary, enthusiastic group, well-funded program, great environment. Qualified candidates should submit curriculum vitae and the names of three references to: **Dr. Susan Wallace, Department of Microbiology, University of Vermont, Burlington, VT 05405.**

POSITIONS OPEN

POSTDOCTORAL POSITION PH.D. IN BIOCHEMISTRY/IMMUNOLOGY

Haskell Laboratory for Toxicology and Industrial Medicine, E. I. du Pont de Nemours & Co., Inc., an equal opportunity employer, has an open postdoctoral position. Duties include participation in pulmonary mechanistic studies designed to elucidate toxicological effects of inhaled particulates. The successful candidate should have working knowledge of tissue culture methods and/or experience with ELISA and standard protein isolation techniques. Postdoctoral positions are 1-year assignments renewable for a second year upon mutual agreement. Excellent salary.

Candidates should send their curriculum vitae to: **Van P. Mc Gehee, Manager, Employee Relations, Du Pont Company, Haskell Laboratory, P.O. Box 50, Newark, DE 19714.**

POSTDOCTORAL POSITIONS CLINICAL CHEMISTRY WASHINGTON UNIVERSITY

We are recruiting individuals with the M.D. and/or Ph.D. degree with a strong motivation for training in clinical chemistry and in the basic sciences. Our unique program, now in its 12th year, provides the opportunity for academic clinical chemistry training in one of the largest Laboratory Medicine Divisions in the country. In addition to clinical training, successful candidates will actively participate in an area of active research. Current areas of faculty interest include: antibody response to carbohydrate and protein antigens, effect of lymphokines on B cell development, mechanism(s) of insulin action, rapid diagnosis of myocardial infarction, mechanism(s) of insulin secretion, placental transport of nutrients and electrolytes, and association behavior of multi-subunit proteins. Two to three candidates are generally accepted per year. For further information please contact: **Jack Ladenson, Ph.D., Division of Laboratory Medicine, Washington University School of Medicine, 660 South Euclid Avenue, Box 8118, St. Louis, MO 63110.**

POSTDOCTORAL POSITIONS IN MOLECULAR NEUROBIOLOGY for individuals interested in an interdisciplinary approach to the study of receptor-operated ion channels, with emphasis on GABA_A and excitatory amino acid receptors. Techniques include molecular biology, radioligand binding, photoaffinity labeling, ligand-stimulated ion flux, monoclonal antibodies, patch-clamp electrophysiology, and fluorescence digital image analysis. Salary \$22,000 to \$30,000. Send curriculum vitae to: **Dr. David Farb, Department of Anatomy and Cell Biology, SUNY Health Science Center, 450 Clarkson Avenue, Brooklyn, NY 11203.** *Equal Opportunity/Affirmative Action Employer.*

DEPARTMENT OF AGRICULTURE AGRICULTURAL RESEARCH SERVICE

POSTDOCTORAL RESEARCH AFFILIATE, photosynthesis research, Urbana, Illinois. Temporary position not to exceed 2 years is available to investigate a proton-amino acid symport recently identified in plant plasma membrane vesicles. A recent Ph.D. with considerable experience in membrane biochemistry or biochemistry is required. Knowledge of molecular techniques is desirable. The annual salary is \$19,493 to \$23,846 with fringe benefits. Please submit curriculum vitae, names of three references, and copies of relevant papers or preprints to: **Dr. Daniel R. Bush, USDA/ARS, University of Illinois, 289 Morrill Hall, 505 South Goodwin Avenue, Urbana, IL 61801; Telephone: 217-333-6109.** Applications should be marked 8N042. *USDA is an Equal Opportunity Employer. Women and minorities are urged to apply.*

POSTDOCTORAL RESEARCH POSITION for Ph.D./M.D. is available in the Section on Hormone Metabolism and Action to study molecular mechanisms of hormone action including gene expression, protein-DNA interactions and thyroid hormone receptors. Interested candidates should send their curriculum vitae and names of three references to: **V. Nikodem, Ph.D., National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Building 10, Room 8N317, 9000 Rockville Pike, Bethesda, MD 20892.** *An Equal Opportunity Employer.*

POSITIONS OPEN

SAINSBURY LABORATORY—NORWICH POSTDOCTORAL RESEARCH ASSOCIATE TO INVESTIGATE GENE REGULATION IN PLANTS

Applications are invited from suitably qualified applicants to work on a project entitled 'Hormonal and Development Control of Gene Expression in Wheat.'

The aim of the project is to examine gene regulatory mechanisms affecting expression of α amylase carboxypeptidase and cathepsin H-like genes of wheat. This will involve detailed dissection of *cis* acting elements using transient expression systems and transgenic plants and analysis of *trans* acting factors. Applicants should have experience of molecular biology in plant, animal, or microbial systems.

The current posts are funded for up to 3 years by the AFRC. The salary will be in the range £9,865 to £11,876 per annum on the research assistant 1A Grade (levels effective 1 March 1988). Applications should be made to: **Dr. David Baulcombe, The Sainsbury Laboratory, John Innes Institute, Colney Lane, Norwich NR4 7UH, UK,** from whom further details can be obtained.

POSTDOCTORAL/RESEARCH ASSOCIATE POSITION available 1 January 1989 for a qualified individual interested in a project involving viral gene transfer and immunotherapy. Demonstrated research experience in basic techniques of mammalian molecular biology required. Some cellular immunology experience would be helpful. *Applicants should be either citizens or permanent residents of the United States.* Send curriculum vitae and letters of interest to either: **Dr. Eli Gilboa or Dr. David Emanuel, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.** *Memorial Sloan-Kettering Cancer Center is an Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE to participate in NCI-funded study on molecular mechanisms of drug resistance. East Carolina University is a constituent institution of the University of North Carolina, is situated on the beautiful coastal plain of Eastern North Carolina, and offers a rich environment for both intellectual and recreational pursuits. Federal law requires proper documentation of identity and employability at the time of employment. Please send curriculum vitae and names and addresses of at least three references by 31 December 1988, to: **Jonathan Nyce, Ph.D., Department of Pharmacology, School of Medicine, East Carolina University, Greenville, NC 27858.** *Affirmative Action/Equal Employment Opportunity.*

UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) AGRICULTURAL RESEARCH SERVICE (ARS)

ARS is seeking the following for **POSTDOCTORAL RESEARCH ASSOCIATE** appointments at its facilities on the University of Wyoming Campus: (i) Geneticist/Molecular Biologist to conduct research on the genetics of insect disease vectors using recombinant DNA technology. Experience in eukaryotic genetics and molecular biology desirable; (ii) Molecular virologist to characterize neutralizing epitopes on the proteins of bluetongue virus. Experience in molecular virology and immunochemistry desired. Salary \$27,716 to \$33,218 depending on experience. For additional information on the research project contact **Dr. Walter J. Tabachnick (position i) telephone: 307-721-0313 or Dr. James O. Mecham (position ii) telephone 307-721-0351.** For information on application procedures, contact: **Julia A. Murchison, 301-344-3138.** Applications in response to this ad should be marked Ann. #9W001 and addressed to: **Arthropod-borne Animal Diseases Research Laboratory, P.O. Box 3965, University Station, Laramie, WY 82071.** *USDA-ARS is an Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE. Position available immediately for study of structural modifications on the biological activities of nucleic acids, synthetic oligo- and polynucleotides, using enzyme and cell culture systems. Experience in the isolation and characterization of nucleic acids or proteins is desirable. Send résumé and three references to: **Dr. T. J. Bardos, Department of Medicinal Chemistry, 425 Hochstetter Hall, SUNY, Buffalo, NY 14260.** *SUNY is an Affirmative Action/Equal Opportunity Employer.*

The University Corporation for Atmospheric Research
Seeks Nominations and Applications for the
DIRECTOR

NATIONAL CENTER FOR ATMOSPHERIC RESEARCH

NCAR is a research laboratory based in Boulder, Colorado and operated by the 58-university consortium UCAR under contract with the National Science Foundation. In concert with the university community, the Center carries out research on fundamental problems in atmospheric and oceanic sciences, and develops and operates major research facilities. NCAR's research includes large-scale dynamics, cloud and mesoscale phenomena, climate, atmospheric chemistry, the sun and interplanetary medium and the interactions between the atmosphere and the oceans, the biosphere, and human activities. Current facilities are in computing, aviation, field observations, and global atmospheric measurement techniques.

The Director is the executive and scientific leader of NCAR, and reports to the President of UCAR.

To be considered, candidates must be able to lead on a broad intellectual front, and must possess a significant record of scientific or technical achievement, and a demonstrated ability for the successful planning, management, and administration of complex research activities.

UCAR intends to fill the position by the summer, 1989. To receive full consideration, applications and nominations should be directed to the address below by 31 January 1989. A full job description may be requested from Ms. Harriet B. Crowe or Ms. Dianne J. Bernier at the address below. Inquiries for other information may also be addressed to Ms. Crowe (303) 497-1657 or Ms. Bernier (303) 497-1655 at UCAR.

SEND APPLICATIONS AND NOMINATIONS TO: Dr. C. E. Leith, Chairman, NCAR Director Search Committee, c/o H. B. Crowe, University Corporation for Atmospheric Research, P.O. Box 3000, Boulder, CO 80307. UCAR is an Equal Opportunity/Affirmative Action Employer.



National Center for
Atmospheric Research

RJR-LEON GOLBERG MEMORIAL FELLOWSHIPS

Postdoctoral Training Opportunities in Integrated Toxicology

Duke University and RJR Tobacco Company now have established training fellowships honoring the eminent toxicologist, the late Dr. Leon Golberg. The program consists of over 50 faculty members representing a wide variety of disciplines including chemistry, ecotoxicology, biochemistry, cell biology, molecular biology, pathology and pharmacology. Emphasis is placed on molecular mechanisms of toxicology, in which this Program is pre-eminent. A competitive stipend will be offered. Fellows will have the opportunity to spend at least 2 years at Duke or RJR, under the guidance of one faculty member and to interact extensively with other faculty members. Interested individuals should send a C.V., a description of their current research project, and the name and addresses of 3 references to:



Doyle G. Graham, M.D., Ph.D.
Integrated Toxicology Program
Box 3712

Duke University Medical Center
Durham, N.C. 27710

Duke University and RJR Tobacco Company are Equal Opportunity Employers

POSITIONS OPEN

POSTDOCTORAL/RESEARCH ASSOCIATE POSITION available now. Biochemistry/cell biology/pharmacology. Project to evaluate the role of a natural purine and its analogues on cell development, malignant expression, and cell surface carbohydrates. Salary negotiable. Opportunity for independence. Submit curriculum vitae, availability, reprints and names of three references to: **Dr. Douglas Armstrong, Cancer Research Center, La Jolla Cancer Research Foundation, 10901 North Torrey Pines Road, La Jolla, CA 92037.**

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATE POSITIONS. (Two Ph.D.'s) available in immunology group studying HIV-1. One position is available to study the role of protein phosphorylation in the infection of CD4(+) T-cells by HIV-1. A second position is available developing immunogenic vaccines to HIV-1 utilizing genetic engineering. Experience in molecular biology and/or cellular immunology is desirable. Send curriculum vitae and three letters of reference to: **Dr. Stephen E. Wright, Texas Tech University School of Medicine, Department of Internal Medicine, 1400 Wallace Boulevard, Amarillo, TX 79106-1797.**

NEW YORK UNIVERSITY MEDICAL SCHOOL POSTDOCTORAL RESEARCH OPPORTUNITIES

Applications are invited for postdoctoral research beginning in winter/spring 1989 to study: (i) Mechanisms of signal transduction and induction of gene transcription through cell surface receptor activation of mammalian cells by cytokines; and (ii) Role of interferons and other cytokines in the regulation of cell growth.

Experience in eukaryotic molecular biology and/or biochemistry is desirable. Applications must be eligible for funding from the NIH (U.S. citizens and permanent residents). Send letters of application, curriculum vitae, and names and addresses of three references to: **Dr. David E. Levy, Department of Pathology, NYU Medical Center, 550 First Avenue, New York, NY 10016.**

Minorities are particularly encouraged to apply.

The University of California, San Diego is seeking a Ph.D. applicant for a **POSTGRADUATE RESEARCHER (PGR)**. Candidates should have experience in molecular biology and retrovirology or herpesvirology to conduct research in AIDS pathogenesis and the role of viral cofactors. Position available immediately for at least 2 years. Salary range based on University of California policy. Interested individuals should send curriculum vitae with a list of three references no later than 28 February 1989 to: **Stephen A. Spector, M.D., Associate Professor, Department of Pediatrics, UCSD Medical Center, 225 Dickinson Street (H-814-H), San Diego, CA 92103.** *Equal Opportunity/Affirmative Action Employer.*

DEPARTMENT OF ZOOLOGY UNIVERSITY OF HAWAII PROFESSOR IN MOLECULAR BIOLOGY

We seek a senior faculty member with research interests in the biology of nucleic acids, proteins, carbohydrates or lipids. Applicants should: (i) have an active research program focussed on basic biological questions at the molecular level such as gene action and regulation, molecular evolution, or adaptive metabolism, and (ii) have an interest in enriching our undergraduate program in the area of molecular biology. The successful applicant will be selected on the basis of leadership potential to serve as Department Chair, outstanding research accomplishment demonstrating sustained program growth and development, and commitment to teaching excellence. We are particularly interested in individuals who enjoy interacting with biologists of diverse research interests, and whose research will thrive in the unique environment of the Hawaiian archipelago. The position is available as early as 1 August 1989. Send curriculum vitae, summary of research and teaching experience and philosophy, reprints, and the names and addresses of three references to: **Dr. Robert A. Kinzie III, Chair, Search Committee, Department of Zoology, University of Hawaii, Honolulu, HI 96822.** Deadline for applications is 1 February 1989. *The University of Hawaii is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

POSITIONS OPEN

POSTDOCTORAL RESEARCH POSITION MOLECULAR MECHANISMS OF MAMMALIAN CELL GROWTH CONTROL MAYO CLINIC/MAYO FOUNDATION

Postdoctoral position available 1 January 1989 to study the molecular and cellular biology of peptide growth factors. Specific areas of research include the identification and cloning of growth factor-regulated genes and the delineation of specific protein-DNA interactions involved in transcriptional control. Applicants should possess a strong background in one or more of the following areas: recombinant DNA methodology; protein biochemistry; mammalian cell culture techniques. Send curriculum vitae and three references to: **Dr. Michael J. Getz, Department of Biochemistry and Molecular Biology, Mayo Clinic/Mayo Foundation, Rochester, MN 55905.** *An Equal Opportunity/Affirmative Action Institution.*

POSTDOCTORAL/RESEARCH SCIENTISTS are being recruited for undertaking cellular and molecular studies on the role of growth factors in development and differentiation of the male reproductive system. Research will include: (i) mechanisms of growth factor signal transduction and pleiotypic responses in somatic cells, (ii) role of secreted proteins in promoting the differentiation of germ cells. Send curriculum vitae to: **Dr. Anthony R. Bellve, Center for Reproductive Sciences, College of Physicians and Surgeons, Columbia University, 650 West 168th Street, New York, NY 10032.**

RESEARCH ASSISTANT PROFESSOR

Department of Physiology and Biophysics is seeking candidates for a position of research assistant professor to conduct research and teach in cellular neuropharmacology and cellular neurophysiology and engage in related faculty activities. Teaching involves neuroscience or related subjects for medical and graduate students. We are seeking individuals with a Ph.D. in neuropharmacology or neuroscience, and at least 4 years of postdoctoral experience. In particular we are seeking candidates with major area of interest and research experience in cellular neuropharmacology and cellular neurophysiology as well as publications in professional journals. Also advantageous will be previous experience in neuronal tissue culture and co-cultures. Send résumé to: **Dr. Nicholas Sperelakis, Physiology and Biophysics Department, College of Medicine, University of Cincinnati, Cincinnati, OH 45267-0576.**

The University of Cincinnati is an Equal Opportunity Employer.

RESEARCH ASSOCIATE for a university in northeast Ohio to do preparation and characterization of novel liquid crystal substances. Involves the use of thermal and light scattering studies to augment understanding of liquid crystal phases and phase transitions and to reveal their relationship to the broader scheme of condensed matter physics. Requirements are Ph.D. in organic chemistry or physics, and 4 years of experience in advanced research on liquid crystals. Forty hours per week, 8 a.m. to 5 p.m., \$22,000 per year. Qualified applicants reply by résumé to: **C. Bussard, JO# 0007871, Ohio Bureau of Employment Services, 145 South Front Street, P.O. Box 1618, Columbus, OH 43216.**

RESEARCH ASSOCIATE, POSTDOCTORAL, OR MASTER'S DEGREE WITH EXPERIENCE to study theoretical (evolutionary biology, ecology) and applied (fisheries biology) molecular population genetics of marine vertebrates and invertebrates. Experience in techniques of obtaining, and analysis of, mitochondrial or single-copy DNA restriction fragment patterns is required. Knowledge of DNA sequencing techniques and proven publication ability is desirable. Position is available at a multidisciplinary research facility with a state-of-the-art molecular genetics laboratory. Salary is \$22,000 to \$25,000 per annum, benefits not included. Send curriculum vitae, names of three references, recent publications, and transcripts if graduated within the past 3 years, by 20 December 1988 to: **Personnel Office, Florida Marine Research Institute, 100 Eighth Avenue Southeast, St. Petersburg, FL 33701.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

PROFESSOR AND CHAIRPERSON. Applications and nominations are invited for the position of Chairperson, Department of Psychology at Florida Atlantic University (FAU). FAU is a member of the State University System with its main campus located in Boca Raton, Florida. We seek an outstanding individual with a distinguished record of scholarship and proven administrative skills to lead the department at a challenging time in its development. In 1980, our department was designated a Program of Emphasis within the State University System of Florida, the only psychology program in the state to receive such recognition. Building on strong academic and research programs at both the undergraduate and master's level, the Program of Emphasis allowed us to expand our faculty and facilities to the point where, in 1985, we were authorized to offer the Ph.D. in psychology. Our program currently emphasizes the areas of biopsychology, cognitive, developmental and personality/social psychology. It is also associated with FAU's Center for Complex Systems (**Dr. Scott Kelso, Director**). Candidates for this professional level position will be expected to demonstrate leadership in attracting outstanding new faculty, graduate students of doctoral level quality, and external funding of research. A complete curriculum vitae, names of four to six referees and a letter of application should be sent by 31 January 1989 to: **Howard Hock, Search Committee for Department Chairperson, Department of Psychology, Florida Atlantic University, Boca Raton, FL 33431.** *Florida Atlantic University is an Equal Employment Opportunity/Affirmative Action Employer.*

PSYCHOPHARMACOLOGIST—The Department of Psychology of The University of Illinois at Urbana-Champaign invites applications for a tenure-track faculty position beginning, at the earliest, 21 August 1989. Candidates conducting research in any area of psychopharmacology/neuropharmacology will be considered. The position will most likely be filled at the assistant professor level, but outstanding candidates at other levels are also encouraged to apply. Salary is dependent upon experience and qualifications. Applicants should hold a Ph.D. at time of appointment.

For full consideration, applications (curriculum vitae, reprints, and a statement of research interests) and three letters of recommendation should be received by 1 February 1989. Address inquiries to: **Dr. Edward Roy, Psychology Department, University of Illinois, 603 East Daniel, Champaign, IL 61820.** Telephone: 217-333-3375. We may interview some candidates before the application deadline of 1 February, but all applications received by that date will receive full consideration.

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

RESEARCH ASSISTANT PROFESSOR

An individual with a Ph.D. in biochemistry or related field and at least 3 years of postdoctoral experience in protein analysis, polyclonal and monoclonal antibody production is sought. The project involves using monoclonal and polyclonal antibodies to detect DNA-protein crosslinks formed by various toxic chemical agents. Emphasis in the laboratory is on heavy metals. The position also requires knowledge of molecular biology techniques. Salary: \$30,000 to \$35,000 per year.

Send curriculum vitae and three letters of reference to:

**Dr. Max Costa
Professor and Deputy Director
Institute of Environmental Medicine
New York University Medical Center
550 First Avenue
New York, NY 10016**

An Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE, UROLOGY

The Division of Urology at Rhode Island Hospital, the primary affiliate of the Brown University Program in Medicine, has a full-time position available for a molecular biologist who is particularly trained in viral probes for identification. Person should be able to perform Southern blots, in situ hybridization, and have an interest in urologic oncology. Application must be received by 13 January 1989. Please send curriculum vitae to: **Barry Stein, M.D., Chairman, Division of Urology, Brown University, Rhode Island Hospital, 593 Eddy Street, Providence, RI 02903.** *Rhode Island Hospital and Brown University are Equal Opportunity Employers.*

UNIVERSITY OF NEBRASKA—LINCOLN DEPARTMENT OF GEOLOGY

Applications for two, full time, tenure-track positions in organic or inorganic geochemistry, micropaleontology and/or sedimentary geochemistry are invited. Ph.D. required. Successful candidates will be expected to teach introductory and advanced undergraduate and graduate courses; supervise masters and doctoral research; develop appropriate courses in research specialty; interact with current faculty and develop a vigorous, externally-funded research program that complements current departmental strengths in groundwater geology, calcareous nannofossils, Cenozoic stratigraphy, and vertebrate paleontology. Position descriptions are broad and general because our first priority is to hire two highly qualified, excellent scientists.

The organic or inorganic geochemist must be interested in developing a program in aqueous, low-temperature geochemistry. The micropaleontologist must be experienced in Cenozoic and Mesozoic geology with research interests in high productivity areas or high latitudes and/or evolutionary tempo and mode. The sedimentary geochemist must have, or be interested in developing, strengths in water/rock interaction as related to diagenesis and/or contaminant movement and must be able to teach a course in process-oriented sedimentology.

The department has 14 faculty, including qualified staff from the State Museum and State Geological Survey who also teach and direct the work of graduate students, and three technicians. It is housed in modern, newly-renovated quarters and is equipped with extensive instrumentation including a new JEOL T-330 SEM with Kevex Delta 4 Quantum EDS, a fully equipped micropaleontological preparation laboratory, a wet chemistry laboratory, an A.A. unit and an automated, computer-driven particle-size analyzer. Computer facilities include a VAX 750 and a broad array of IBM PC's, printers and software for faculty and student use. Graduate student and faculty research emphasizes the integration of field and laboratory studies, primarily in soft-rock geology and hydrogeology.

Applicants should send a current curriculum vitae, copies of transcripts, lists of publications and courses taught, description of research and the names and addresses of three references to: Chairman, Geology Search Committee, 214 Bessey Hall, Department of Geology, University of Nebraska-Lincoln, Lincoln, NE 68588-0340. Additional information available at (402) 472-2663. The evaluation of applicants will begin on January 16, 1989, and continue until both positions are filled.

Affirmative Action/Equal Opportunity Employer

chemistry

SENIOR DEVELOPMENT SCIENTIST Plasma Products

A prestigious leader in the pharmaceuticals industry, we've recently earned a reputation for breakthrough research in the area of biotechnology. As a result of strong and continued growth, we currently seek a creative and experienced professional to join us at our state-of-the-art Mid-western production facility.

Responsibilities include supervision of projects involving large-scale use of monoclonal antibodies and the industrial application of affinity chromatography. Candidate will also provide technical support for manufacturing departments, pilot plant, and outside suppliers of ascites or monoclonal antibodies, while assisting in the introduction of new biotechnology processes through creative and innovative techniques. For this demanding supervisory position, we require a Ph.D. in Biochemistry or closely related discipline, with a degree in Bioengineering. Supervisory experience is essential.

If your qualifications meet our needs, we can offer you an excellent salary, medical/dental/life insurance, 401(k), bonus plan and relocation program. So come and discover the possibilities. You'll like what we have to offer. Please send your resume to:

**Box 176, Science
1515 Broadway
New York, NY 10036**

Equal Opportunity Employer

Scientists



Servier Research Institute
is recruiting

Medicinal chemists and Pharmacologists

at several professional levels and for a growing number of therapeutic areas.

If **DISCOVERY** turns you on, get in touch with us. Positions are available at both senior and junior levels.

Our Institute is one of the major research institutes in France and is looking towards a bright future, located in the attractive western outskirts of Paris.

If you are interested, write us including CV and photo to SERVIER Research Institute, Réf. SCI, 11 rue des Moulineaux, 92150 SURESNES (FRANCE).

Research Scientists Pharmacology of Inflammation

Two positions are available within the Department of Biochemical and Molecular Pathology of Merck Sharp & Dohme Research Laboratories which is engaged in multi-disciplinary studies aimed at developing novel therapeutic agents for treatment of inflammatory diseases. For both positions we seek creative and enthusiastic scientists with excellent communication skills and with post-doctoral experience.

Position 1 - Cardiovascular/Pulmonary Pharmacologist, will involve the design and execution of experiments to evaluate novel agents of potential therapeutic importance in animal models of shock and inflammation. Qualified candidates will have expertise in the measurement and evaluation of cardiovascular and/or pulmonary function *in vitro* and in laboratory animals (eg. rodents, dogs, sheep, swine, non-human primates).

Position 2 - Cellular Pharmacologist/Electrophysiologist, will involve the investigation of the inter-relationships between trans-membrane ion flux and ligand-mediated activation of inflammatory and immune cells. Qualified candidates will have expertise in electrophysiological and/or other techniques that can be applied to probe ionic aspects of signal-transduction processes.

Merck Sharp & Dohme Research Laboratories are located in Rahway, New Jersey approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. Interested candidates should submit their curriculum vitae with the names of three references and salary requirements to: **Ms. Lonnie Deetz, R80M-TL1, Merck & Co., Inc., P.O. Box 2000, Rahway, NJ 07065.**

An equal opportunity employer.



Merck & Co., Inc.

POSITIONS OPEN

Ph.D.-LEVEL SCIENTIST with experience/interest in the physiology and/or cell biology of healing epidermis, especially with respect to ocular tissues, needed for growing biotech. Company in La Jolla area. Start immediately.

POSTDOCTORAL POSITION to study the pathology/histology or physiology of some aspect of wound healing also available. Approximate starting date mid 1989. Send curriculum vitae to: **Telios Pharmaceuticals, 2909 Science Park Road, San Diego, CA 92121. Attention: WH.**

RESEARCH FACULTY POSITION

The Public Health Research Institute (PHRI) invites applications for appointment as a member of its research faculty at either the junior or senior level. Candidates must have training and experience of the highest quality and an exciting research program addressing fundamental questions in eukaryotic or prokaryotic cell biology, virology, or molecular genetics. The research program must be funded or, in the case of a junior applicant, eminently fundable.

The PHRI is an independent, not-for-profit research organization founded in 1942. Its current programs center on basic molecular biology and molecular genetics.

The PHRI offers an excellent research environment and laboratory facilities, start-up funds, and a generous benefits package. Salary is negotiable.

Candidates should submit curriculum vitae, a statement of research interests and accomplishments, and a list of at least three references. Review of applications will begin on 11 December 1988, but applications will be accepted until the position has been filled. Applications should be sent to: **Dr. Leonard Mindich, Chairman, Recruiting Committee, Public Health Research Institute, 455 First Avenue, New York, NY 10016.**

The PHRI is an Equal Opportunity Employer.

RESEARCH OPPORTUNITIES at the National Center for Toxicological Research (NCTR)—Opportunities for faculty and postgraduates to conduct collaborative research at NCTR, a Food and Drug Administration laboratory in central Arkansas. Research efforts focus on testing the assumption used in assessing risks posed by toxic chemicals emphasizing studies in biomarkers, modulators of toxicity, and extrapolation/risk assessment. *U.S. citizenship or PRA status required.* For more information contact: **Research Participation Program at NCTR, University Programs Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117, telephone: 615-576-3190.** Please indicate if interested in faculty and/or postgraduate program.

SCIENCE EDUCATION—ASSISTANT PROFESSOR, College of Education, University of Delaware (tenure-track). Doctorate, an interest in science education, and research potential in science education required; strong science background and school teaching experience desirable. Responsibilities include conducting research and directing graduate programs in science education, service, obligations and teaching undergraduate courses in elementary science education and graduate courses in science education for prospective and current elementary and secondary teachers. Available 1 September 1989. Send a letter of application, a brief description of research interests, available publication samples, curriculum vitae, and three letters of reference to: **Dr. William B. Stanley, Chair, Department of Educational Development, 131 Willard Hall, College of Education, University of Delaware, Newark, DE 19716.** Applications received by 6 February 1989 will be given first consideration; applications will be accepted until position is filled. Inquiries about the position should be made to: **Dr. Nancy W. Brickhouse, Search Committee Chair, at 301-451-6254.** *The University of Delaware is an Equal Opportunity Employer which encourages applications from qualified minority groups and women.*

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

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

POSITIONS OPEN

RESEARCH SPECIALIST MOLECULAR BIOLOGY ARIZONA STATE UNIVERSITY

A Ph.D.-level research specialist in molecular biology is sought by the Department of Botany for the newly established ASU Center for the Study of Early Events in Photosynthesis. Expertise in oligonucleotide synthesis, DNA sequencing, and/or site-directed mutagenesis is required. Preference will be given to individuals with experience in photosynthesis research. The successful candidate will be expected to conduct collaborative research and will be encouraged to develop an independent research program.

The position, pending final budgetary approval, is initially funded for 4 years (12-month appointment). Applicants should submit their curriculum vitae, a statement of research interests, and have three letters of reference sent to: **Wim Vermaas, Search Committee Chair, Department of Botany, Arizona State University, Tempe, AZ 85287-1601.**

Review of applications will begin 30 January 1989 and continue until a suitable applicant is selected. *ASU is an Equal Opportunity/Affirmative Action Employer.*

SENIOR PROFESSORSHIP IN THE SPACE SCIENCES UNIVERSITY OF CALIFORNIA, LOS ANGELES

UCLA seeks an outstanding scientist, theoretical or experimental, in the space sciences, broadly construed as any physical science dependent upon, or stimulated by, data collected by space techniques. The appointment may be singly in any one of the Departments of Astronomy, Atmospheric Sciences, Chemistry, Earth and Space Sciences, or Physics, or jointly between departments and/or the Institute of Geophysics and Planetary Physics. Strengths of UCLA that the appointment might complement include: space plasma physics, solar-planetary relationships, climate dynamics, star formation, cosmochemistry, and planetary physics.

Interested individuals should contact: **Professor William M. Kaula, Department of Earth and Space Sciences, University of California, Los Angeles, CA 90024-1567. Telephone: 213-825-4363.** *UCLA is an Affirmative Action/Equal Opportunity Employer.*

SENIOR RESEARCH FACULTY. (i) Biomaterials/Bioengineering, (ii) Craniofacial Growth & Development, (iii) Epidemiology, (iv) Immunology/Microbiology. The University of Southern California (USC) School of Dentistry has opened searches to identify up to four experienced research scientists in the above disciplines. Tenured or tenure-track appointments will be made at the associate professor or professor level as appropriate. Individuals must have demonstrated the ability to successfully compete for external research funding and have well-established programs that could link with the research interests of the clinical faculty. Individuals would also be expected to maintain an involvement in the teaching programs of the school. The University of Southern California is an AAU member and offers many exciting opportunities for interdisciplinary collaborative efforts. *USC is an Equal Opportunity/Affirmative Action Employer.* For further information or for consideration, contact: **Howard M. Landesman, D.D.S., M.Ed., Executive Associate Dean, USC School of Dentistry, University Park, Los Angeles, CA 90089-0641.**

STATISTICIANS (TWO) EVALUATIONS DEPARTMENT

We are looking for two statisticians (M.S. or B.S. with 2 to 5 years of experience) to fill positions in Ciba Corning Diagnostics' Department of Clinical Evaluations and Statistics (one opening in Oberlin, Ohio and one in Medfield, Massachusetts). The successful candidate will work with scientists and engineers in all phases of evaluations by coordinating laboratory experiments, preparing data for analysis using data acquisition and SAS programs, analyzing data using SAS, and managing external clinical trials. Experience with data management, statistics, and clinical chemistry is desired as well as an interest in working intensely with data. Please send your résumé and salary requirements to: **Ciba-Corning Diagnostics, Human Resources Department, 132 Artino Street, Oberlin, OH 44074.** *An Equal Employment Opportunity/Affirmative Action Employer.*

POSITIONS OPEN



California Institute of Biological Research

RESEARCH PROGRAM DIRECTORS

California Institute of Biological Research (CIBR), a non-profit institute, has recently been established with financial support from Stratagene in La Jolla, CA. The institute is in a beautiful, coastal location in close proximity to the Salk Institute, Research Institute of Scripps Clinic, Medical Biology Institute, La Jolla Cancer Research Center and the University of California, San Diego. CIBR will consist of laboratories with research interests in eukaryotic gene regulation, oncogenes, cellular and molecular transformation, control of immune responses, molecular biology of differentiation, and mammalian development. CIBR research programs are funded by extramural granting agencies and aided by significant core supplementation. Its research laboratory directors may also serve as consultants to Stratagene with the opportunity to engage in collaborative projects. Investigators with appropriate research interests are encouraged to apply.

Send curriculum vitae to: **Personnel, California Institute of Biological Research, 11099 North Torrey Pines Road, La Jolla, CA 92037.**

STAFF TOXICOLOGIST: Responsible for Quality Assurance Unit for preclinical testing programs involving small mammal testing and for coordination of company's safety, industrial hygiene and environmental safety monitoring and training programs. Assists design of testing protocols, audits facilities, and reviews data collection procedures and final reports to ensure compliance with good laboratory practice regulation. Participates in design and implementation of company policy to comply with federal, state, and local regulations governing industrial safety and hygiene and environmental safety and in design and implementation of training programs for hazardous material and hazardous waste management. Ph.D. biology, veterinary science or animal science with specific coursework in toxicology, experimental biology and experimental animal science. One year's graduate or postgraduate research experience in biochemical research, environmental toxicology, regulations governing toxic substances, good laboratory practices and laboratory safety. Salary: \$32,500 per year. Job site and interview: Irvine, California. Send this ad and curriculum vitae to: **Kendall McGaw Laboratories Inc., P.O. Box 25080, Santa Ana, CA 92799-5080, Attention: Pat Correa** no later than 2 January 1989.

TWO TENURE-TRACK FACULTY POSITIONS IN NEUROSCIENCE are available at Florida Atlantic University assigned to a new multidisciplinary program in Complex Systems and the Brain Sciences ('Dynamical Neuroscience'). Level of appointment is open. We seek outstanding individuals capable of generating strong extramural support wishing to research and teach in an explicitly interdisciplinary setting that includes physics (nonlinear dynamics), computer science and psychobiology. The broad aim of this program is to further our understanding of pattern generation/formation in the nervous system and its relation to behavior through a synergy among theory, computation, and experiment at different levels of description. Among the areas of chief research interest are: integrative neurobiology, with emphasis on sensorimotor systems; cellular/molecular processes in neuronal growth and development; neuromodulatory influences on neuronal circuits; functional regeneration/plasticity in the vertebrate nervous system; studies of so-called mid-range neural networks and their relation to behavioral function; neurophysiological correlates of complex behavior using multiple electrode recording techniques.

Salary, start-up funds, and teaching load are attractive. Please send complete curriculum vitae and four letters of reference, by 31 January 1989 to: **J. A. S. Kelso, Center for Complex Systems, Building MT-9, Florida Atlantic University, Boca Raton, FL 33431.** *FAU is an Equal Employment Opportunity/Affirmative Action Employer.*

GENEX CORPORATION

A leader in Protein Engineering
is looking for people to work as part of an innovative research and marketing team in the development of novel protein products.

PROFESSIONAL RESEARCH POSITIONS

Candidates with a Ph.D. and at least two years of postdoctoral experience are required for the following positions. Successful candidates will have good communication skills and the ability to supervise the research of junior staff.

Molecular Geneticist: Individual to direct and participate in the genetic engineering of novel proteins. Hands-on experience in techniques of gene cloning and expression of heterologous proteins is required, and a background in gram-positive molecular genetics is preferred.

Protein Crystallographer: Candidates with expertise in crystallography, protein engineering, graphics, and related disciplines are invited to apply. This individual will participate in applying three-dimensional structural data to the alteration of protein stability properties and enzyme active sites.

Protein Chemist: Candidates with expertise in the isolation and physical characterization of proteins and a background in protein modification, immobilization, and protein-protein interactions are sought. Experience in HPLC, affinity chromatography, and related methods of purification is preferred.

Analytical Biochemist: Individual to manage and participate in the development of HPLC methods for the purification and characterization of proteins and provide HPLC services to various research programs. Practical experience in protein analytical methods and instrumentation is essential.

RESEARCH ASSOCIATE POSITIONS

Bachelor's or Master's degree holders in the above areas are also required. Candidates should have experience in one or more of the following areas: molecular genetics, protein chemistry, biophysical chemistry, immunochemistry, and enzymology. Skills in HPLC purification, computer programming, and/or the growing of macromolecular crystals are especially desired.

PRODUCT DEVELOPMENT POSITIONS

Candidates should have Bachelor's or Master's degrees in biology, chemistry, or a related field, along with experience in relevant disciplines and good organization and communication skills.

Product Development Manager: Candidate should have experience in the development of laboratory separation products. Individuals with experience in LC, electrophoresis, and ELISA and an understanding of immunochemicals and their applications are preferred.

Applications Biochemist: Candidate will have hands-on experience in protein purification, HPLC and immunoassays. To assist in market development of Genex products by developing product-based applications and providing technical service to customers.

Field Sales Representatives: Candidates should have experience in selling to the biochemistry and analytical chemistry marketplace. Products will include affinity proteins, chromatography separations media, purifications instruments and sample preparation devices.



GENEX provides an outstanding research environment, competitive salaries, comprehensive benefits, and the chance to excel with a fast-growing industry leader. We invite you to forward your resume, including salary requirements and an indication of which position you are applying for, to: Ms. Trisha Whelan, Genex Corporation, 16020 Industrial Drive, Gaithersburg, MD 20877.

Genex is an Equal Opportunity Employer.

POSITIONS OPEN

Brown University seeks a **SENIOR RADIOBIOLOGY/BIOPHYSICIST** for a tenured appointment as a Professor of Medical Science. Individuals at Brown University who may be candidates have been identified. Should have at least 10 years of experience and demonstrated success in obtaining grants; have demonstrated skills in teaching undergraduate, graduate and thesis supervision for Ph.D. candidates. Should have demonstrated ability to interact with other Investigators in Oncology, Pathobiology, Pharmacology. Will supervise a cell sorting facility. Applications should be received by **15 January 1989**. Addressed to: **Arvin S. Glicksman, M.D., Chairman, Department of Radiation Medicine, Brown University, Box G, Providence, RI 02912.**

Brown University is an Equal Opportunity/Affirmative Action Employer and actively solicits applications from qualified protected and minority groups.

SENIOR RESEARCH ASSOCIATE in forensic toxicology. Includes research, development, and teaching, specifically in areas addressing functions of a working forensic toxicology service laboratory providing analytical and interpretive information to the medical examiner and law enforcement communities. Specific areas of work are determination of drugs and poisons in biological fluids and tissues, characterization of drugs and plant material submitted by law enforcement. Teaching in related area such as pharmacokinetics.

Must be able to write and make presentations well. Publication in scientific, refereed journals necessary. Two years of experience in a forensic toxicology laboratory required.

Salary: \$22,932.

Send résumés to: **Jack Hilzheim, Tennessee Job Service, 1309 Poplar, Memphis, TN 38104.** An Equal Opportunity/Affirmative Action Employer.

NORTHERN ARIZONA UNIVERSITY DEPARTMENT OF BIOLOGICAL SCIENCES TWO TENURE-TRACK POSITIONS

VERTEBRATE BIOLOGIST: We invite applications and nominations for a tenure-track position to be filled at the assistant/associate professor level beginning 1 July 1989. Applicants must exhibit proven research productivity and be prepared to develop an independent research program. Postdoctoral research experience is desirable. Individuals with research interests in areas such as behavior, biogeography, ecology, evolution, physiological ecology, population genetics, or systematics are especially encouraged to apply. The successful candidate will contribute to both the undergraduate and graduate curricula. *We particularly seek applications from women and minorities.*

CELL/MOLECULAR/MICROBIAL BIOLOGIST: We anticipate an additional opening for a tenure-track position in the area of cell/molecular/microbial biology at the assistant/associate professor level to begin 1 July 1989. Applicants should exhibit proven research productivity, and be prepared to teach undergraduate microbiology as well as to contribute to the graduate curriculum. Postdoctoral research experience is desirable. *Women and minorities are strongly encouraged to apply.*

Curriculum vitae, a statement of research plans, representative reprints, and four letters of recommendation should be submitted by 15 January 1989 to: **Chairman, Department of Biological Sciences, Box 5640, Northern Arizona University, Flagstaff, AZ 86011.** Northern Arizona University is an Affirmative Action/Equal Opportunity Employer.

VIROLOGIST

The Department of Biology of The University of Akron has a tenure-track assistant professor position open for September 1989. Applicants must have a Ph.D. with experience in molecular virology and cell culture and have held a postdoctoral fellowship. Responsibilities include maintaining an active research program and teaching virology and animal tissue culture to undergraduate and graduate students. Send curriculum vitae, present and proposed research interests, and three letters of reference to: **Dr. Dale Jackson, Chairman, Department of Biology, The University of Akron, Akron, OH 44325** by 15 January 1989. *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

TENURE-TRACK FACULTY POSITIONS: BIOCHEMISTRY/MOLECULAR BIOLOGY. Applications are invited for positions in the Department of Biochemistry. Candidates must have a Ph.D., postdoctoral experience, and a plan for an independent research program. Positions also involve teaching at undergraduate, graduate and medical school levels. Send curriculum vitae and references to: **Chairman, Search Committee, The University of North Texas, Biochemistry Department, P.O. Box 13048, Denton, TX 76203.** UNT/TCOM is an Equal Opportunity/Affirmative Action Employer.

VERTEBRATE PHYSIOLOGIST

Applications are invited for a tenure-track assistant professorship in the Department of Zoology, University of Toronto, beginning 1 July, 1989, or thereafter. We are seeking an outstanding and innovative scientist who has recently received his/her Ph.D. (postdoctoral experience preferred). The successful candidate will be expected to establish a vigorous, independent research program, preferably in environmentally-related vertebrate physiology, and to teach at undergraduate and graduate levels. Salary, currently between \$31,500 and \$53,600 for an assistant professor, will be commensurate with experience and qualifications. By 1 February 1989, applicants should send a current curriculum vitae, a description of their future research plans, and the names, addresses and telephone numbers of three referees. If they wish, applicants may arrange with referees to send letters on their behalf. Please send materials to: **Dr. Michael Barrett, Physiologist Search Committee, Department of Zoology, University of Toronto, 25 Harbord Street, Toronto, Ontario M5S 1A1, Canada.**

In accordance with the Employment Equity Policy of the University of Toronto, applications are invited from all qualified women and men.

CONFERENCE

**TUMOR CELLS AND
THE MICROCIRCULATION:
A CONCEPTUAL FRAMEWORK
FOR CANCER**
8 to 10 January 1989
La Jolla, California

This meeting will explore the interaction between tumor cells and the microcirculation. The working agenda is that cancer cells and their microcirculatory environment are both interdependent and inseparable. By combining sophisticated techniques in micro-circulation with recent advances in cell and molecular biology, new frontiers are highlighted and projected.

The role of integrins and vascular addressins will be presented in relation to the endothelium and the underlying connective tissue, highlighting the function of attachment sites and growth factors. These elements, and tumor cell pathology and microcirculation will be integrated to create a new perspective on cancer and the inflammatory process.

Speakers and Discussants: **Karl-E. Arfors** (La Jolla), **Michael P. Bevilacqua** (Boston), **Rolando Del Maestro** (London, Canada), **Jeffrey Evelhoch** (Detroit), **Ronald Goldfarb** (Pittsburgh), **Pietro Gullino** (Turin), **Frithjof Hammersen** (Munich), **Ronald Herberman** (Pittsburgh), **Marcos Intaglietta** (La Jolla), **Rakesh Jain** (Pittsburgh), **Brian Leyland-Jones** (Rockville), **Peter Libby** (Boston), **Thomas Maciag** (Rockville), **Konrad Messmer** (Heidelberg), **Michael Palladino** (San Francisco), **David F. Ranney** (Dallas), **Daniel B. Rifkin** (New York), **Erkki Ruoslahti** (La Jolla), **Jeffrey Schlom** (Bethesda), **Bruce Zetter** (Boston), **Benjamin W. Zweifach** (La Jolla).

Conference will be held at La Jolla Cancer Research Foundation, La Jolla, California, 8, 9, and 10 January 1989. Registration fee: \$175.00 per person (meals included; hotel extra). Send inquiries to:

**Marcos Intaglietta, Ph.D.
Department of AMES, R-012
University of California, San Diego
La Jolla, CA 92093**
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POSITIONS OPEN

Northwestern Memorial Hospital, a university-affiliated teaching institution, has an immediate opening for a **VASCULAR RESEARCH TECHNICIAN**. Responsibilities include the study of blood vessel diseases and the development of artificial arteries. Skills essential to this position are tissue extraction, HPLC, gel electrophoresis, and tissue culture. Some experience in molecular biology and histology strongly preferred. A minimum of 3 years of experience is required. M.S. preferred. We offer a competitive salary and full benefit package including health/dental insurance and tuition reimbursement. For consideration, please send résumé to: **Michele D. McClellan, Northwestern Memorial Hospital, 310 East Huron, Chicago, IL 60611.**

VISUAL SYSTEM

A **POSTDOCTORAL POSITION** is available immediately to work in the laboratory of **Dr. Simon LeVay** on interhemispheric connections in the visual system of mammals. This NEI-funded project is intended to elucidate the role of interhemispheric connections by study of their anatomical organization, by analysis of the visual response properties of callosal projection neurons, and by observation of the effects of inactivation of the callosal pathway on the response properties of callosal-reciprocating neurons. Please send curriculum vitae to: **Simon LeVay, Ph.D., Salk Institute, P.O. Box 85800, San Diego, CA 92138.** *Equal Opportunity Employer M/F/H/V.*

WOMEN'S STUDIES COORDINATOR: Faculty appointment at associate or full professor level; 75% administering and teaching in growing women's studies minor and 25% teaching in an Arts and Sciences discipline. Ph.D., outstanding scholarship and strong teaching credentials (preferably some in interdisciplinary women's studies). Send curriculum vitae and three letters of recommendation by 1 January 1989, to: **Beth Mintz, Chair, Women's Studies Committee, Department of Sociology, University of Vermont, 31 South Prospect Street, Burlington, VT 05405.** *Minority candidates are especially encouraged to apply. Affirmative Action/Equal Opportunity Employer.*

GRADUATE PROGRAM

PREDOCTORAL AND POSTDOCTORAL TRAINING IN VIROLOGY AT UCLA SCHOOL OF MEDICINE

The Department of Microbiology and Immunology, University of California, Los Angeles (UCLA) School of Medicine, invites applications for training positions in virology. Research programs include the cellular and molecular basis of latency and pathogenesis of herpes simplex viruses (**Jack G. Stevens**), molecular biology of influenza viruses, transport and sorting of eukaryotic proteins (**Debi P. Nayak**), gene regulation and transformation by papilloma viruses (**Felix O. Wettstein**), molecular mechanisms of viral persistence (**Rafi Ahmed**), molecular biology of picornaviruses and regulation of eukaryotic transcription (**Asim Dasgupta**), molecular genetics and pathogenesis of human retroviruses (**Irvin S. Y. Chen**), and molecular basis for transcriptional activation of herpesvirus genes (**Lawrence T. Feldman**). Stipends available. For predoctoral training leading to the Ph.D. degree, contact: **Dr. Rafi Ahmed**; and for postdoctoral positions, contact: **Dr. Debi P. Nayak, Department of Microbiology and Immunology, UCLA School of Medicine, Los Angeles, CA 90024-1747.**

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SYMPOSIUM

NEW PERSPECTIVES ON EVOLUTION, 18 and 19 April 1989. Sponsored by The Wistar Institute. This multidisciplinary symposium is designed to provide a forum for interrelating recent discoveries and new insights in evolution. Topics include: an historical overview of facts and trends; the interplay of organism and environment; and the impact of recent advances in molecular biology, biochemistry and developmental biology. For further information, contact: **External Affairs Office, The Wistar Institute, 3601 Spruce Street, Philadelphia, PA 19104.** Telephone: 215-898-3716.

AAAS MASS MEDIA SCIENCE AND ENGINEERING FELLOWS PROGRAM

The American Association for the Advancement of Science (AAAS) invites outstanding students in the natural and social sciences and engineering, preferably those at the graduate level, to apply for the 1989 Mass Media Science and Engineering Fellows Program. Students majoring in English, journalism, or other nontechnical fields are not eligible for these fellowships.

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

AAAS pays a \$300 weekly stipend and travel expenses. Deadline for receipt of applications is 1 February 1989. *Minorities and persons with disabilities are especially encouraged to apply.*

For further information and applications, write:

**Mass Media Science and Engineering
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Scientist

We are seeking a scientist with a Ph.D. in Cell Biology, Biochemistry or Immunology with several years' post-doctoral experience in coagulation/fibrinolysis or endothelial cell biology. You will work in a small team on studies related to modulation of fibrinolytic/coagulation components of endothelial cells in culture as a function of extracellular matrix/growth factors. The demonstrated ability to develop a competitive research program is essential as is the ability to supervise a research team.

The Society offers a comprehensive compensation package which includes relocation assistance where required.

Please submit your résumé, in confidence no later than December 31, 1988 to: **Director, Human Resources.**

The Canadian Red Cross Society'



1800 Alta Vista Drive, Ottawa, Ontario K1G 4J5

RESEARCH TECHNICIAN

The Biotechnology Division at the Amoco Research Center in Naperville, IL, is currently seeking applications for a Research Technician. The selected candidate's research will be focused on basic and applied aspects of yeast and bacterial molecular biology and gene expression. This position requires a Bachelor's or Master's degree in Molecular Biology, Biochemistry, or a related field. Experience with library screening, vector construction, DNA and RNA purification, DNA sequencing, hybridization, and protein biochemistry is desirable.

The Amoco Research Center offers a salary commensurate with education and experience, exceptional benefits and a convenient suburban Chicago location. Please forward your curriculum vitae and three letters of reference to:



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Scientist Drug Metabolism

Smith Kline & French Laboratories, a leader in Pharmaceutical research, is seeking an experienced scientist with a background in Pharmacology or Biochemistry for its drug metabolism unit located in suburban Philadelphia.

While supervising a small laboratory group, the scientist will design, conduct and report on the investigations of the disposition of new drug candidates in humans and animals. A working knowledge of pharmacokinetics is essential. Also, the scientist will work as part of several multi-disciplinary teams, providing the drug metabolism perspective and data leading to the discovery and development of new therapeutic agents, and publish these findings in leading scientific journals. Highly developed interpersonal and communication skills will be important.

The successful candidate will possess a Ph.D. in pharmacology, biochemistry or related field with 3-5 years of relevant experience, preferably in drug development. Practical experience in bioanalytical methods and animal experimentation is also required.

We offer an attractive compensation/benefits/relocation package and a stimulating, highly supportive research environment. For confidential review, please forward your C.V. and names of three references to: Liz McKendry, Assoc. Employment Administrator — L0014, Smith Kline & French Laboratories, Research & Development, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

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ASSISTANTSHIPS

GRADUATE RESEARCH ASSISTANTSHIPS in marine ecosystem studies, environmental chemistry and toxicology, fisheries science, and geochemistry for highly qualified students. Emphasis on Ph.D. degree. For information contact: **Dr. G. Roesijadi, Chesapeake Biological Laboratory, Center for Environmental and Estuarine Studies, University of Maryland, Solomons, MD 20688.** The University of Maryland is an Affirmative Action/Equal Opportunity Employer.

COURSE

MOLECULAR ENDOCRINOLOGY AND TECHNIQUES FOR HORMONE ACTION 20 to 25 February 1989

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

Co-Directors: **M. R. Hughes and B. W. O'Malley**
Fee: \$365 (\$245: fellows and students).

For further information contact:

Bonnie Cuthbert
Department of Cell Biology
Baylor College of Medicine
Telephone: 713-799-6200
Deadline: 29 January 1989

FELLOWSHIPS

FELLOWSHIPS—American Museum of Natural History Research/Museum Fellowships are available to postdoctoral researchers and established scholars starting in summer and fall 1989. Areas include vertebrate and invertebrate zoology, paleozoology, anthropology, mineral sciences, and the field of museum education as it relates to natural history museums or planetariums. Deadline for applications, including Chapman Fellowships (ornithology), is 15 January 1989. Request information booklet and application from: **Office of Grants and Fellowships, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024.**

PREDOCTORAL FELLOWSHIPS IN PHARMACOLOGY—Training available in molecular pharmacology, cardiovascular and neuropsychopharmacology in well-funded modern laboratories. Competitive stipends (\$9500 per year). Attractive setting on the coastal plain of North Carolina. *Federal law requires proper documentation of identity and employability at the time of employment.* It is requested this documentation be included with your application. Contact: **Dr. Brian A. McMillen, Department of Pharmacology, School of Medicine, East Carolina University, Greenville, NC 27858.** Affirmative Action/Equal Opportunity Employer.

McDONNELL SCHOLAR IN MOLECULAR ONCOLOGY AT WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

The Division of Hematology/Oncology announces a new program for physician investigators who want to apply the newer advances in basic sciences to oncology. The purpose of the program is to serve as a bridge between postdoctorate training and independent faculty status. The awardee will be able to devote all of his/her time to the development of an independent research program in an environment where outstanding senior investigators are available for encouragement and support. The awardee will receive \$375,000 payable over 3 years, including a stipend of \$50,000 per year. The balance of the award is to be used for supplies and technical support at the discretion of the awardee. Candidates must have an M.D. degree or M.D./Ph.D. degrees and have demonstrated outstanding potential for creative investigation.

Applicants should submit curriculum vitae, a statement of research experience and specific interests and have three letters of recommendation sent to:

Stuart Kornfeld, M.D.
Washington University School of Medicine
Box 8125
660 South Euclid Avenue
St. Louis, MO 63110

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP—The Philip E. Scott Memorial Fellowship is available immediately at the Coriell Institute for Medical Research to work in the following disciplines: environmental mutagenesis, mycoplasma infections, biological response modifiers, endothelial cell biology, control of viral gene expression, human genetics, genetic mutant diseases and aging. The fellowship is available for 2 years, and includes salary, fringe benefits and supplies. Send résumé including a statement of research interests and references to: **Dr. Gerard J. McGarrity, Coriell Institute for Medical Research, Copewood Street, Camden, NJ 08103.** Equal Employment Opportunity/Affirmative Action Employer.

FELLOWSHIPS IN BASIC MECHANISMS OF LUNG DISEASE

Pre- and post-doctoral traineeships available immediately in Basic Mechanisms of Lung Diseases at the University of Alabama at Birmingham supported by the National Heart, Lung and Blood Institute. Preceptors include scientists in the Departments of Microbiology, Biochemistry, Cell Biology and Anatomy, Comparative Medicine, Physiology and Biophysics, Pathology, Medicine, Anesthesiology, and Pediatrics. They have active research programs in basic mechanisms of acute and chronic parenchymal lung diseases and chronic obstructive airways diseases; basic mechanisms of cellular and humoral defenses of the lung; lung injury mediated by the inflammatory response and free radicals; and the pathogenesis, immunologic response and treatment of infectious respiratory disease. Courses available in Pathobiology of the Lung as well as pulmonary journal clubs and research symposia. Fellowships available on a competitive basis to applicants (U.S. citizens and permanent residents only) with a recent Ph.D., M.D., or D.V.M. Send: i) curriculum vitae, ii) three letters of reference, and iii) a statement of research and career goals to: **Gail H. Cassell, Chairman, Department of Microbiology and Director, Lung Diseases Training Program, University of Alabama at Birmingham, UAB Station, Birmingham, AL 35294.**

Two **PH.D. DOCTORAL FELLOWSHIPS** in the area of food animal biotechnology. Research emphasizes molecular immunology, molecular virology, and gene transfer in food animals. Candidates must be U.S. citizens with a B.S., B.A. in science or D.V.M. degree. Stipend: \$15,000 per year for 3 years, starting fall of 1989. Send, by 15 February 1989, curriculum vitae, transcripts, and three letters of recommendation to: **Dr. David Thawley, Program Director, 455 Veterinary Teaching Hospital, College of Veterinary Medicine, University of Minnesota, St. Paul, MN 55108.** The University of Minnesota is an Equal Opportunity Employer and specifically invites and encourages applications from women and minorities.

PREDOCTORAL FELLOWSHIPS

Are you interested in a career devoted to solving health problems associated with chemical pollution of the environment? Perhaps you should consider earning a Ph.D. in environmental toxicology in The Joint Graduate Program in Toxicology of Rutgers, The State University of New Jersey and The University of Medicine and Dentistry of New Jersey/Robert Wood Johnson Medical School. The program is a component of The Environmental and Occupational Health Sciences Institute which also contains the newest National Institutes of Health Environmental Health Center. We are conducting a national search for scholars who wish to earn the M.S. and/or Ph.D. in Toxicology. Our internationally recognized faculty will provide an opportunity for you to conduct research in cellular/molecular toxicology, immunotoxicology, hepatotoxicology, solvent toxicology, carcinogenesis, inhalation/respiratory toxicology, neurotoxicology, environmental and aquatic toxicology, and metabolism of environmental chemicals. Sources of graduate student support include a N.I.E.H.S. training grant, graduate teaching assistantships, and a variety of graduate research fellowships, which provide a stipend of \$10,000 per year plus tuition and fees. For further information please contact: **Dr. Robert Snyder, Director, Joint Graduate Program in Toxicology, Rutgers University College of Pharmacy, Piscataway, NJ 08855-0789.** Telephone: 201-932-3720. Rutgers, the State University of New Jersey is an Equal Opportunity/Affirmative Action Employer.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP

The Medical Genetics Birth Defects Center, Division of Medical Genetics at Cedars-Sinai Medical Center in Los Angeles, has a postdoctoral fellowship position available.

The primary focus of the laboratory is the understanding of the molecular basis of connective tissue diseases and the structural and functional consequences of collagen gene mutations.

Ph.D. with experience in molecular biology, protein chemistry, and cell culture highly desirable.

Please submit résumés with references to:

Mark W. Schmitz
Cedars-Sinai Medical Center
Employee Relations Department
Brown Building, 1st Floor
8700 Beverly Boulevard
Los Angeles, CA 90048

DREXEL FELLOWSHIPS IN BIOMEDICAL ENGINEERING AND SCIENCE. These fellowships are supported by the Calhoun Endowment. Students can specialize in the following areas: artificial organs, bioinstrumentation, biomedical imaging and signal processing, biomedical science, biomaterials, biomedical systems and control, cardiovascular dynamics, diagnostic ultrasound, sensors and electrode, biomechanics and rehabilitation. Each fellowship includes a minimum stipend of \$9,500 for a 12-month appointment beginning fall 1989. With a waiver of all tuition and fees, this award is worth approximately \$20,000. Deadline for applications: 28 February 1989. For application write: **Dr. Dov Jaron, Director, Biomedical Engineering and Science Institute, Drexel University, Philadelphia, PA 19104.**

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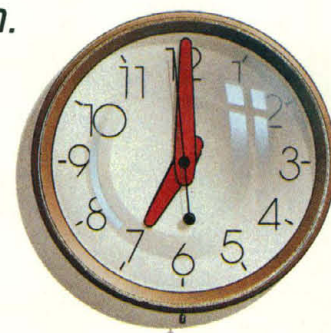
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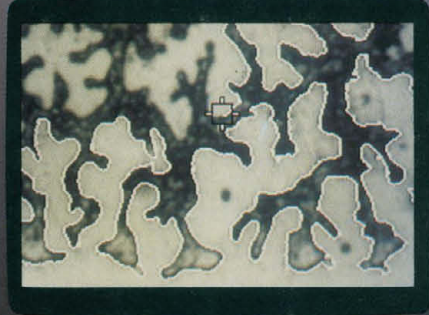


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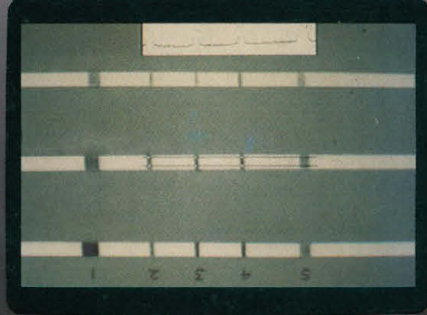
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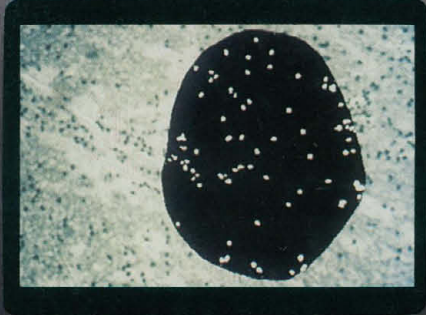
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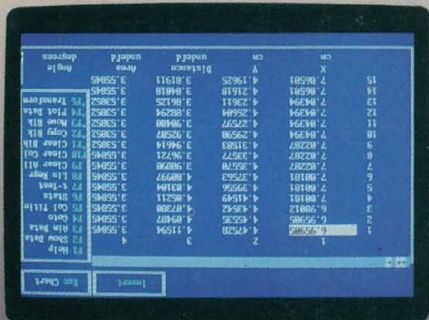
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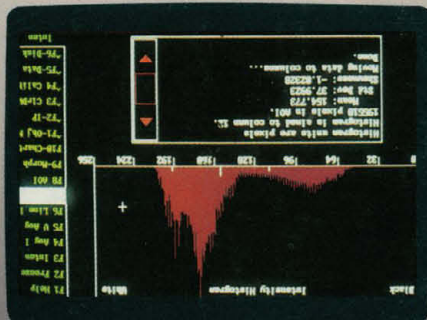
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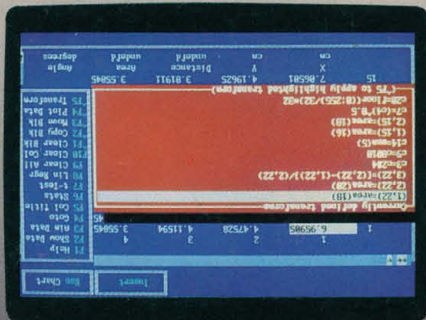
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