

surements but also for those reading and evaluating the data of others.

For those directly or indirectly active in plant-water relations, this volume will be useful as a current guide to research and a reference for years to come.

ALBERT H. MARKHART III
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Landform Studies from Space

Geomorphology from Space. A Global Overview of Regional Landforms. NICHOLAS M. SHORT and ROBERT W. BLAIR, JR., Eds. National Aeronautics and Space Administration, Washington, DC, 1986 (available from Government Printing Office, Washington, DC). xx, 717 pp., illus. \$41. NASA Special Publication 486.

This atlas of images of earth from space has as its core 237 "plates," each of which consists of a space image (some occupying two pages) with three or four informative and enhancing aerial and ground photographs. Commentaries, or extended captions, draw attention to information contained in the primary images. The texts are generally excellent and germane to the

plates. The space images are dominantly Landsat black-and-white, but there are some color composites as well as photographs taken by astronauts with hand-held cameras. A few radar and thermal images are also used. Image reproduction is of excellent quality throughout.

The book contains 12 chapters by various authorities on geomorphology. A general introduction on regional landforms analysis is followed by nine thematic groups of plates, each with a brief introduction on that type of landform. Victor Baker argues for a return to research in regional landforms analysis using the new imagery, and Everett, Morisawa, and Short emphasize tectonic studies utilizing regional landforms as a main data source. Discussions of volcanic, fluvial, deltaic, coastal, karst, eolian, glacial, and planetary landforms follow, all utilizing a regional approach made possible by satellite and aerial views. The classical drainage patterns (dendritic, trellis, and so forth) take on a spectacular regional aspect when viewed on large-area, small-scale images.

The remaining two chapters, by Robert S. Hayden and others, treat geomorphological mapping and global geomorphology. Well-established methods of geomorphological mapping are easily adapted to regional studies and could lead to new understanding of

climatically controlled processes and terrain sensitivity, for example. In the chapter on global geomorphology, the importance of including the physiography of the sea floor in regional studies is brought out, and some directions for new research, in the form of questions, are given.

The book concludes with two appendixes, one dealing with remote sensing principles applied to space imagery, the other giving sources of the illustrations and data. A useful index completes the volume.

No radical or new concepts are developed, but the book emphasizes a new perspective for landform studies. It is clearly the editors' and authors' hope that this emphasis on regional analysis will lead to new ideas and perhaps revitalize the physiographic studies now generally fallen into disfavor in geomorphology.

LAURENCE H. LATTMAN
Office of the President,
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Socorro, NM 80701

Books Received

Advances in Nuclear Astrophysics. E. Vangioni-Flam *et al.*, Eds. Editions Frontières, Gif sur Yvette, France, 1986. xii, 611 pp., illus. \$59. From a workshop, Paris, July 1986.

Agricultural Insect Pests of Temperate Regions and Their Control. Dennis S. Hill. Cambridge University Press, New York, 1987. viii, 659 pp., illus. \$95.

Algorithmics. The Spirit of Computing. David Harel. Addison-Wesley, Reading, MA, 1987. xiv, 425 pp., illus. Paper, \$22.95.

Amino Acids in Health and Disease. New Perspectives. Seymour Kaufman, Ed. Liss, New York, 1987. xvi, 619 pp., illus. \$98. UCLA Symposia on Molecular and Cell Biology, vol. 55. From a symposium, Keystone, CO, May-June 1986.

Antarctic Science. D. W. H. Walton, Ed. Cambridge University Press, New York, 1987. viii, 280 pp., illus. \$39.50.

Application of Distribution Coefficients to Radiological Assessment Models. T. H. Sibley and C. Myttenaere, Eds. Elsevier Applied Science, New York, 1986. xiv, 430 pp., illus. \$69.25. From a seminar, Louvain-la-Neuve, Belgium, Oct. 1985.

Applications of the Monte Carlo Method in Statistical Physics. K. Binder, Ed. 2nd ed. Springer-Verlag, New York, 1987. xiv, 341 pp., illus. Paper, \$35. Topics in Current Physics, 36.

Archaeobacteria '85. Otto Kandler and Wolfram Zillig, Eds. Fischer, New York, 1987 (distributor, VCH, New York). viii, 434 pp., illus. \$95. From a workshop, Munich, F.R.G., June 1985.

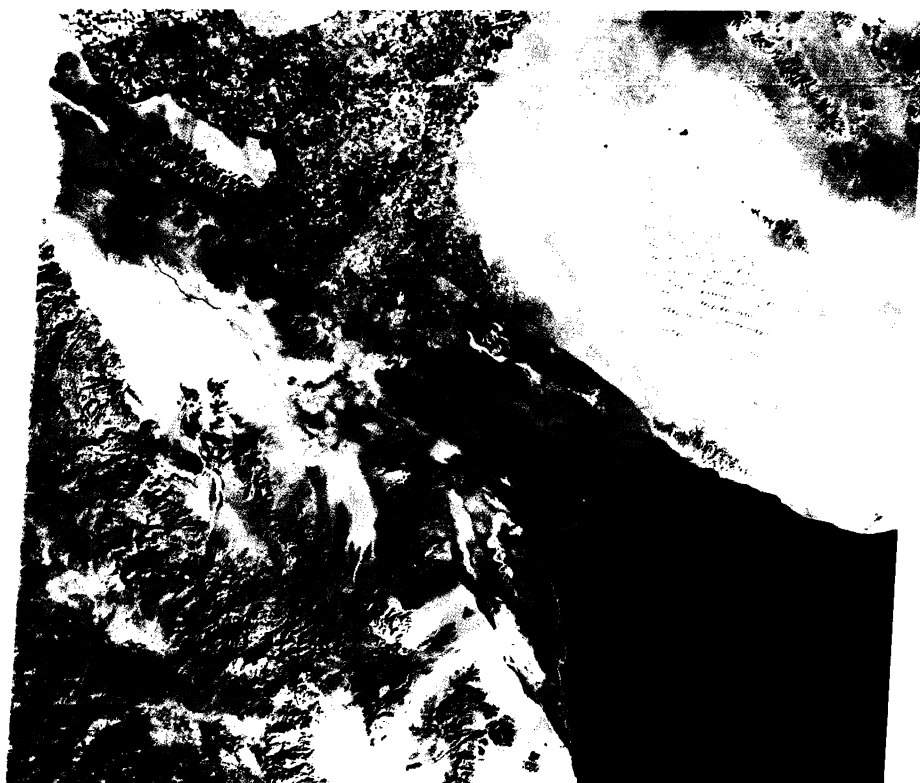
The Archaeology of Ancient China. Kwang-chih Chang. 4th ed. Yale University Press, New Haven, CT, 1987. xxvi, 450 pp., illus. \$50; paper, \$17.95.

The Archaeology of Western Iran. Settlement and Society from Prehistory to the Islamic Conquest. Frank Hole, Ed. Smithsonian Institution Press, Washington, DC, 1987. 332 pp., illus. \$49.95. Smithsonian Series in Archaeological Inquiry.

The Biology of Perch and Related Fish. John Craig. Croom Helm, London, and Timber Press, Portland, OR, 1987. xviii, 333 pp., illus. \$42.50.

BIOTEC 1. Microbial Genetic Engineering and Enzyme Technology. C. P. Hollenberg and H. Sahm, Eds. Fischer, Stuttgart, 1987 (U.S. distributor, VCH, Deerfield Beach, FL). viii, 142 pp., illus. Paper, \$32.50. From a conference, Düsseldorf, F.R.G., 1985.

Cellular and Humoral Immunological Components of Cerebrospinal Fluid in Multiple Sclerosis. A. Lowenthal and J. Raus, Eds. Plenum, New York, 1987. xii, 525 pp., illus. \$89.50. NATO Advanced



"This Landsat-2 view shows the northern end of the Gulf of California where the Colorado River passes into Mexico and forms a prominent delta at its mouth. The Sierra de Juárez, in Baja California (lower left), exemplifies tectonic landforms. Star, linear, and crescentic dunes are evident in the sand sheets that make up the Gran Desierto of the Sonoran Desert of Northwest Mexico." [From *Geomorphology from Space*]

Science Institutes Series A, vol. 129. From a workshop, Limburg, Belgium, April 1986.

Centennial Field Guide. Vol. 1, Cordilleran Section of the Geological Society of America. Mason L. Hill, Ed. Geological Society of America, Boulder, CO, 1987. xxii, 490 pp., illus. \$43.50.

Changing Cancer Patterns and Topics in Cancer Epidemiology. In Memory of Professor Mitsuo Segi. Minoru Kurihara *et al.*, Eds. Japan Scientific Societies Press, Tokyo, and Plenum, New York, 1987. xx, 219 pp., illus. \$75. Gann Monograph on Cancer Research no. 33.

Clean Coal Technology. Programmes and Issues. International Energy Agency. Organisation for Economic Co-operation and Development, Paris, 1987. 174 pp. Paper, \$22. Based on a series of workshops.

Color Chemistry. Syntheses, Properties and Applications of Organic Dyes and Pigments. Heinrich Zollinger. VCH, New York, 1987. xii, 367 pp., illus. \$110.

Comparative Physiology of Environmental Adaptations. Vol. 1, Adaptations to Salinity and Dehydration. R. Kirsch and B. Lahlou, Eds. viii, 204 pp., illus. Vol. 2, Adaptations to Extreme Environments. P. Dejours, Ed. viii, 224 pp., illus. Vol. 3, Adaptations to Climatic Changes. P. Pévet, Ed. viii, 187 pp., illus. Each, \$118.75; the set, \$320. Karger, Basel, 1987. From a conference, Strasbourg, France, Aug.-Sept. 1986.

Computer Capacity Planning. Theory and Practice. Shui F. Lam and K. Hung Chan. Academic Press, Orlando, FL, 1987. xx, 215 pp., illus. \$24.95.

Dictionary of Plastics Technology. Wörterbuch Kunststofftechnologie. Hans-Dieter Junge, Ed. VCH, New York, 1987. 315 pp. \$95.

Einstein Plus Two. Petr Beckmann. Golem, Boulder, CO, 1987. 212 pp., illus. \$36.

Electroanalytical Methods in Chemical and Environmental Analysis. Robert Kalvoda, Ed. Plenum, New York, and SNTL, Prague, 1987. 237 pp., illus. \$45.

Electrodynamics of the Semiconductor Band Edge. A. Stahl and I. Balsev. Springer-Verlag, New York, 1987. x, 215 pp., illus. \$58.20. Springer Tracts in Modern Physics, vol. 110.

English Science, Bacon to Newton. Brian Vickers, Ed. Cambridge University Press, New York, 1987. xii, 244 pp. \$44.50; paper, \$15.95. Cambridge English Prose Texts. Containing excerpts from Bacon, Boyle, Power, Hooke, Sprat, Wilkins, and Newton.

Enzyme Induction, Mutagen Activation and Carcinogen Testing in Yeast. Alan Wiseman, Ed. Horwood, Chichester, U.K., and Halsted (Wiley), New York, 1987. 215 pp., illus. \$77.95. Series in Biochemistry and Biotechnology.

Essays, Comments, and Reviews. William James. Harvard University Press, Cambridge, MA, 1987. xlii, 785 pp. \$60. The Works of William James.

The Evolution of Human Societies. From Foraging Group to Agrarian State. Allen W. Johnson and Timothy Earle. Stanford University Press, Stanford, CA, 1987. xiv, 360 pp., illus. \$39.50.

Die evolutionäre Erkenntnistheorie. Bedingungen, Lösungen, Kontroversen. Rupert Riedl and Franz W. Wuketits, Eds. Parey, Berlin, 1987. 287 pp. DM 39.80.

Evolutionary Genetics of Invertebrate Behavior. Progress and Prospects. Milton David Huettel, Ed. Plenum, New York, 1986. x, 335 pp., illus. \$59.50. Based on a colloquium, Gainesville, FL, March 1983.

Fat Production and Consumption. Technologies and Nutritional Implications. C. Galli and E. Fedeli, Eds. Plenum, New York, 1987. x, 336 pp., illus. \$62.50. NATO Advanced Science Institutes Series A, vol. 131. From a workshop, Selvino, Italy, March 1986.

Fertility Regulation Today and Tomorrow. E. Diczfalussy and M. Bygdeman, Eds. Raven, New York, 1987. xii, 317 pp., illus. \$49. Serono Symposia Publications from Raven Press, vol. 36. From a symposium, Stockholm, Sweden.

Fifty Challenging Problems in Probability with Solutions. Frederick Mosteller. Dover, New York, 1987. viii, 88 pp., illus. Paper, \$3.95. Reprint, 1965 ed.

Flow-Induced Vibration of Circular Cylindrical Structures. Shoci-Sheng Chen. Hemisphere (Harper and Row), New York, 1987. xxvi, 464 pp., illus. \$110.

Flyby. The Interplanetary Odyssey of Voyager 2. Joel Davis. Atheneum, New York, 1987. xvi, 237 pp. + plates. \$19.95.

Instabilities and Nonequilibrium Structures. Enrique Tirapegui and Danilo Villarroel, Eds. Reidel, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). x, 337 pp., illus. \$69.50. Mathematics and Its Applications. From a workshop, Valparaíso, Chile, Dec. 1985.

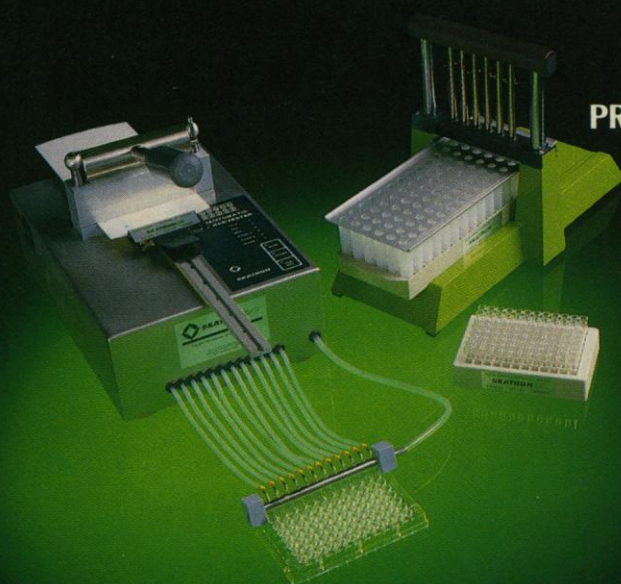
Multivariate Analysis of Variance and Repeated Measures. A Practical Approach for Behavioural Scientists. D. J. Hand and C. C. Taylor. Chapman and Hall (Methuen), NY, 1987. xiv, 262 pp. \$55; paper, \$25.

The Pesticide Manual. A World Compendium. Charles R. Worthing, Ed. 8th ed. British Crop Protection Council, Thornton Heath, U.K., 1987 (U.S. distributor, Blackwell Scientific, Palo Alto, CA). xx, 1081 pp., illus. \$85.



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Ribonuclease Inhibitor

Human Placental RNase Inhibitor is a protein that binds noncovalently to ribonucleases and inhibits their activity in reactions such as complementary DNA cloning and RNA transcription. Two hundred units of RNase inhibitor inhibits by 50% the hydrolysis of cyclic CMP (cytidine 2',3'-monophosphate) by 1 μ g of RNase A with 0.1M tris-acetate (pH 6.5), 1 mM EDTA, and 1 mM cyclic CMP. Bio-Rad Laboratories. Circle 626.

HPLC Chemistry for Hydrophobic Peptides

The SULFOETHYL Aspartamide chemistry can retain peptides with as few as one positive charge during high-performance liquid chromatography and fast-protein liquid chromatography. Similarly charged peptides can be separated on the basis of their hydrophobicity. The chemistry purifies neuropeptides, signal peptides, CNBr peptide fragments, and epidermal- and platelet-derived growth factors. Separations may be scaled up from analytical to preparative quantities. The Nest Group. Circle 624.

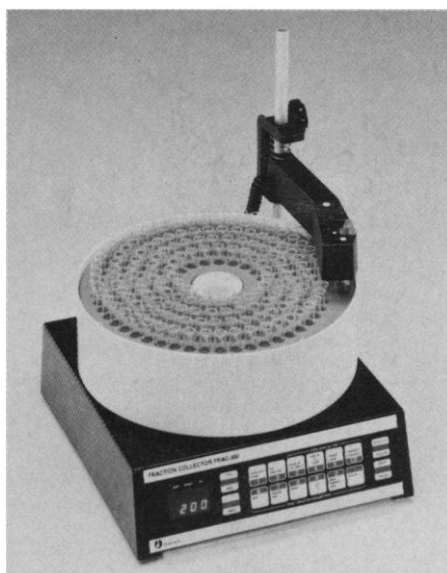
Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card and placing it in a mailbox. Postage is free.

Graphics Terminal for Molecular Modeling

The S6236 is a graphics terminal capable of 170,000 vectors per second. It was designed for molecular modeling with Chem-X software. The terminal's hardware relieves Chem-X of the task of depth-cuing, and the terminal's firmware takes over three-dimensional (3-D) local transformations, so that solid 3-D structures may be rapidly rotated and translated on the screen. Chem-X operates on VAX computers with the VMS operating system. \$26,000. Chemical Design. Circle 628.

Chromatography Fraction Collector

The FRAC-200 is a programmable fraction collector for standard chromatography, fast-protein liquid chromatography, and high-performance liquid chromatography. Collection may be based on time, volume,



or drop counting. After collection, the FRAC-200 calculates integration data on as many as 19 peaks per run. It can operate either as a stand-alone instrument or as part of a system; the collector can communicate with controllers, pumps, monitors, valves, and recorders. Pharmacia (Sweden). Circle 617.

Sequencing System

Sequenest is a bacterial system for generating overlapping clones. Transposon-generated deletions allow the user to isolate a nested set without manipulating deletions in vitro. The vectors incorporate the multiple

cloning region from mp18 or mp19 within the *lacZ* gene to allow blue-white identification of recombinants. Included in the vectors is M13 for producing single-stranded plasmid DNA for sequencing. The kit comes with two vectors, helper phage, and bacterial hosts. Gold BioTechnology. Circle 644.

Molecular Modeling Software

MicroChem is a software package for building, analyzing, and displaying three-dimensional molecular structures. The program is available in basic and advanced versions for organic molecules, inorganic molecules, and polymers. A format-conversion subprogram allows molecule files to be transferred to and from a VAX computer. Structures may be displayed or laser-printed as stick, ball and stick, or space-filling representations. Other features include editing functions; *x*, *y*, and *z* rotations; automatic checking for missing bond angle and length values; hydrogen-suppressed drawing mode; and labeling by sequential atom number, atomic symbol, or type code. MicroChem operates on Macintosh Plus or SE computers with 1 megabyte of random-access memory and either a hard disk or an 800-kilobyte external disk drive. Intersoft. Circle 643.

Literature

Monoclonal Antibodies is a brochure about specialty reagents for basic immunological and veterinary research. Veterinary Medical Research & Development. Circle 638.

The Best Way to Hire Scientific Personnel is a brochure about a service that finds temporary and permanent technical staff for laboratories. Lab Support. Circle 639.

Serum and Serum Protein Products Catalog features tissue-culture serum, second antibody antisera, disease-state sera, albumins, synthetic urine, clotting products, and animal organs and glands. Biocell Laboratories. Circle 641.

Custom Products is a catalog listing clean rooms, industrial ovens, test chambers, and custom laminar air-flow equipment. Forma Scientific. Circle 609.

Mega-Pure Water Purification Systems is a 16-page brochure that features compact stills and deionization, ultrafiltration, and reverse osmosis water systems. Corning Glass Works, Science Products. Circle 612.

Phosphoramidites describes β -cyanoethyl and *O*-methylphosphoramidites for DNA synthesis. Beckman Instruments, Spinco Division. Circle 613.

Personnel Placement

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

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UNIVERSITY OF SASKATCHEWAN BIOLOGY

Applications are invited for a tenure-track position at the ASSISTANT PROFESSOR level in comparative vertebrate physiology, starting 1 July 1988. Applicants should have a Ph.D. and a strong commitment both to teaching and to research. Submit curriculum vitae and names, addresses and telephone numbers of at least three referees to: Dr. T. A. Steeves, Acting Head, Department of Biology, University of Saskatchewan, Saskatoon, Saskatchewan, S7N 0W0, Canada. *In accordance with Canadian immigration requirements, applications from Canadian citizens and landed immigrants will be given priority.* The closing date is 31 January 1988.

ASSISTANT PROFESSOR, MEDICAL ONCOLOGY—University of Colorado—Tenure-track in Medicine. Candidate expected to establish independently funded basic research in cancer biology. Completion of Medical Oncology Boards, U.S. Medical License, 2 years of postdoctoral basic research required. Start-up funds available. Salary \$40,000 to \$60,000. Send curriculum vitae and three reference letters to: Dr. L. Michael Glode, University of Colorado Health Sciences Center, 4200 East 9th Avenue, Denver, CO 80262; telephone: 303-270-8801. *An Equal Opportunity Employer.*

ASSISTANT PROFESSOR MICROBIOLOGY/IMMUNOLOGY

A tenure-track faculty position at the assistant professor level is available for a person capable of teaching immunology to medical students. Allocation of time is 25% teaching and 75% research. Applicants should send curriculum vitae and names of three references to: Gerald Tritz, Ph.D., Department of Microbiology and Immunology, Kirksville College of Osteopathic Medicine (KCOM), 800 West Jefferson, Kirksville, MO 63501. *KCOM is an Equal Opportunity/Affirmative Action Employer.*

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ASSISTANT PROFESSOR: Department of Anatomy. A tenure-track position available 1 July 1988. Applications are invited from candidates with at least 2 years of postdoctoral experience. Funded programs in the Department focus on glial biology, control of locomotion, limb development, spinal cord transplantation, developmental neurobiology, graft vs. host disease, cell kinetics, and chronobiology. Responsibilities include the teaching of medical students (gross anatomy and/or neuroscience) and of graduate students, as well as establishment of an independent, funded research program. Interested candidates should send curriculum vitae, statement of research goals, and list of three references to: Dr. Shirley Ann Gilmore, Professor and Chairman, Department of Anatomy (#510), University of Arkansas for Medical Sciences, 4301 West Markham, Little Rock, AR 72205-7199 by 31 December 1987. *Equal Opportunity/Affirmative Action Employer.*

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Applications, supported by a current curriculum vitae, reprints of up to two recent publications, and the names of three referees, should be sent to:

Professor J. P. Mayberry
Department of Mathematics
Brock University
St. Catharines, Ontario
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Closing date for applications is 31 January 1988.

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BIOLOGY—Two 9-month, tenure-track positions available 16 August 1988 at the ASSISTANT PROFESSOR level; developmental biology and molecular biology. Applicants must have completed the Ph.D., and preferably, have postdoctoral research experience. Applicants for the molecular biology position should have expertise in microbial genetics. Teaching responsibilities will include introductory biology courses. Successful applicants will also be expected to become involved in an existing recombinant genetics program and establish research programs that involve undergraduate and graduate (M.S.) students. *Women and minorities are encouraged to apply.* Screening of applicants will begin 15 January 1988. Submit curriculum vitae with names, addresses, and telephone numbers of three references and statement of research interests to: Biologist Search, Office of Academic Affairs, Western Kentucky University, Bowling Green, KY 42101. *An Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR—TENURE TRACK

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

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOLOGY

The Department of Biology at Loyola College has an opening for an entry level tenure-track position beginning fall 1988. Applicants should have Ph.D. in an appropriate field and both teaching and research experience. Responsibilities will include coordination of the introductory biology course and sharing in its teaching plus offering two of the following three courses: Developmental Biology, Animal Behavior or Biostatistics/Computer Modeling. Faculty are expected to conduct active research programs. Please send curriculum vitae, statement of teaching and research interests, and names and addresses of three references by 10 December 1987 to: Dr. Donald Keefer, Chair, Department of Biology, Loyola College, 4501 North Charles Street, Baltimore, MD 21210-2699. *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR (TENURE TRACK) IMMUNOBIOLOGY RESEARCH CENTER DEPARTMENT OF LABORATORY MEDICINE AND PATHOLOGY

A tenure-track faculty position is available for candidates who hold an M.D. degree with subspecialty training in oncology/hematology or a Ph.D. degree in immunology with a minimum of 3 years of postdoctoral experience or research in cellular immunology with special emphasis on T lymphocytes and NK cells. Demonstration of research productivity is necessary, to include publications in reviewed journals.

The person in this position will be involved in teaching immunology to medical students, graduate students, postgraduate residents, postdoctoral fellows. The individual will be expected to develop an independent research program in cellular immunology as it relates to T lymphocyte and NK cell differentiation. The individual will have administrative responsibilities for seminars in the Immunobiology Research Center. Applicants should send curriculum vitae and three letters of recommendation to:

IRC Search Committee
University of Minnesota
Box 198 UMHC

Department of Laboratory Medicine and Pathology
420 Delaware Street SE
Minneapolis, MN 55455

Deadline for receipt of applications is 15 January 1988. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

The Department of Wildlife and Fisheries Sciences invites applications from qualified individuals with an earned doctorate to fill a tenure-track ASSISTANT PROFESSORSHIP IN MAMMALIAN POPULATION/EVOLUTIONARY GENETICS with expertise in molecular or other modern techniques desired. Duties include undergraduate and graduate teaching, the development of a strong research program and interaction with ongoing programs in wildlife management and conservation biology. Send curriculum vitae and the names of at least three references to: Dr. John W. Bickham, Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, TX 77843-2258. Applications will be accepted until 15 February 1988.

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PLANT MOLECULAR BIOLOGIST to work on genetic modification and development of transformation systems in the *Gramineae*. Ph.D. in molecular biology with experience in plant transformation and free DNA delivery systems is preferred. Salary \$30,000 plus benefits. Two **POSTDOCTORAL RESEARCH ASSOCIATES** to work on plant regeneration from embryogenic cells and protoplasts of cereals/grasses. Experience with protoplast culture required. Salary: \$21,000. Send curriculum vitae and three letters of recommendation to: Indra K. Vasil, Laboratory of Plant Cell and Molecular Biology, 511 Bartram Hall West, University of Florida, Gainesville, FL 32611; telephone: 904-392-1193. *Equal Opportunity/Affirmative Action Institution.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF PHARMACOLOGY/TOXICOLOGY. Tenure-track position available 1 January 1988. Duties include teaching and research. Requires Ph.D. in pharmacology, 2 years of postdoctoral experience, and ability to establish independent fundable research. Area of specialization is open. Send résumé and names of references to: Search Committee, Pharmacology Department, School of Medicine, University of North Dakota (UND), Grand Forks, ND 58202 by 15 December 1987. *UND is an Equal Opportunity Employer.*

ASSISTANT PROFESSOR OF PHYSIOLOGY (RESEARCH TRACK)

Faculty position for individual with Ph.D. degree and 3 years of postdoctoral training in genetic, biochemical and molecular biology techniques. The individual will collaborate on physiological and cell biological investigations dealing with regulation of muscle contractility via myosin phosphorylation. Must have experience in DNA sequencing and cloning and expression of foreign genes in eukaryotic cells. Send curriculum vitae and names of individuals who will provide letters of recommendation to: Dr. James T. Stull, Department of Physiology, The University of Texas Southwestern Medical Center at Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75235-9040. *An Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR, PALEOBOTANY

Tenure-track position available 15 August 1988. Ph.D. required; preference to applicants with postdoctoral research experience in palynology, evolutionary morphology, anatomy. The successful candidate will be expected to establish a vigorous research program and direct graduate students. Send curriculum vitae, statement of research interests, and three letters of recommendation to: Dr. Stan R. Szarek, Department of Botany, Arizona State University, Tempe, AZ 85287-1601 by 15 January 1988. *An Equal Opportunity/Affirmative Action Employer.*

DEPARTMENT OF ANATOMY

The Department of Anatomy at the Northeastern Ohio Universities College of Medicine invites applications for a tenure-track position at the ASSISTANT OR ASSOCIATE PROFESSOR level. Individuals with research experience and expertise in molecular and cell biology, and electron microscopy are encouraged to apply. Current departmental research interests include muscle biology and neuroendocrinology. Teaching responsibilities are in gross anatomy. The successful candidate should have, (i) teaching experience in gross anatomy; (ii) publications; and, (iii) a demonstrable potential for, or a proven record of, extramural funding. The Department is well-equipped and there is excellent administrative support for research and teaching. Send curriculum vitae, bibliography, statement of teaching and research goals, research funding (past and present), and the names of at least three references no later than 29 January 1988, to: Norman Taslitz, Ph.D., c/o The Office of Human Resources, Northeastern Ohio Universities College of Medicine, Rootstown, OH 44272.

An Equal Opportunity/Affirmative Action Employer.

BIOCHEMISTRY AND CHEMISTRY FACULTY POSITIONS. Applications are solicited for three tenure-track assistant professorships in the Department of Chemistry of the University of Southern Mississippi (USM). These positions are a consequence of the expansion of the department. At least one position will be filled by a biochemist. All areas of biochemistry will be considered. The successful candidates will have postdoctoral or industrial experience and will have demonstrated a high potential for achieving prominence in their specific research areas and attracting external funding. Other things being equal, preference will be given to candidates whose interests complement those of the current faculty. USM is a major comprehensive State University and is located in a progressive city close to the Gulf Coast and New Orleans. Applicants should submit a résumé and statements of present and future research plans, and have three letters of recommendation sent to: Dr. David Creed, Department of Chemistry, University of Southern Mississippi, Box 5043, Hattiesburg, MS 39406-5043. Applications received after 30 January 1988 cannot be assured of consideration. *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR VETERINARIAN—VIROLOGIST/MICROBIOLOGIST—The Department of Veterinary and Animal Sciences, University of Massachusetts, Amherst, is seeking applications for a tenure-track position for a virologist or microbiologist at either the assistant or associate professor level. Applicants must have a D.V.M. and a Ph.D. degree or a D.V.M. with postdoctoral experience. A demonstrated ability to apply molecular approaches to viral/bacterial pathogenesis as applied to domestic animals is required. The successful candidate will participate in a departmental biotechnology program by establishing a strong research initiative, funded in part by external grants. Of particular interest are either avian or bovine model systems. Teaching responsibilities will include an undergraduate course and a graduate course in the candidate's area of expertise. Salary commensurate with qualifications and experience. Interested applicants should submit curriculum vitae, a statement of research interests, and the names of four references by 29 January 1988 to: Dr. Donald Black, Head, Department of Veterinary and Animal Sciences, 313 Paige Laboratory, University of Massachusetts, Amherst, MA 01003. *Women and minorities are particularly encouraged to apply. The University of Massachusetts is an Affirmative Action/Equal Opportunity Employer.*

ASSOCIATE DEAN

SCHOOL OF SCIENCE AND MATHEMATICS

Responsibilities: The Associate Dean assists and reports to the Dean in the management of the School and represents the School in the Dean's absence. The primary responsibility of the Associate Dean is the management of undergraduate and graduate curriculum development within the School.

Qualifications: Include an earned doctorate in a field within the School from an accredited institution; qualifications for faculty appointment at advanced rank. Five years of recent teaching experience; demonstrated excellence in university teaching, curriculum development, and advisement and counseling of students.

Salary: \$4,401-\$5,325 per month, negotiable. Effective date of appointment: summer 1988. Applications: submit a cover letter, curriculum vitae and three current letters of reference. Postmark documents no later than 15 December 1987 to: Professor John Lindsay, Chair, Associate Dean Search Committee, School of Science and Mathematics, California State University, Northridge, 18111 Nordhoff Street, Administration 505, Northridge, CA 91330. *An Equal Opportunity/Affirmative Action, Title IX, Sections 503, 504 Employer.*

BIOCHEMISTS

Molecular Biosystems, Inc., is an innovator in the development of diagnostics based on non-radioactive hybridization probes. Our rapid expansion has created a staff research scientist position in our biochemistry department.

Qualified candidates will have a Ph.D. in biochemistry, molecular biology, or related fields with 2 to 5 years of experience in an industrial or postdoctoral environment. Responsibilities include design and implementation of novel hybridization, and detection systems for synthetic DNA probe based diagnostics.

Submit résumés with salary information to:



Molecular Biosystems, Inc.
10030 Barnes Canyon Road
San Diego, CA 92121
Attention: Deon Thomas

MBI is an Equal Opportunity Employer.

BOTANIST

Tenure-track faculty position as assistant professor to begin August 1988. Ph.D. required. To teach upper level, undergraduate courses in areas of morphology and systematics of higher plants, including development and tissue culture. Will also share responsibilities in introductory biology courses. Modern facilities, TEM and SEM, good herbarium, 130-acre nature center. Research encouraged. *Albion College encourages applications from female and minority candidates.* Send letter of application, current curriculum vitae, transcripts, and three letters of reference to: D. G. Dillery, Chair, Biology Department, Albion College, Albion, MI 49224. Deadline for application is 5 January 1988. *Albion College is an Equal Opportunity Employer.*



Yale UNIVERSITY

Molecular Genetics

The Department of Biology seeks a senior level molecular geneticist working with a eukaryotic system, preferably yeast. The successful applicant will be expected to interact with the department's strong groups in genetics and in molecular, cellular, developmental, and organismal biology. Effective teaching at graduate and undergraduate levels is highly desirable. Send curriculum vitae, description of research, and names and addresses of at least three references by January 15, 1988 to:

Executive Secretary
Department of Biology
PO Box 6666
New Haven, CT 06511

Yale University is an Affirmative Action/Equal Opportunity Employer.

Scientist Molecular Oncology/Tumor Biology Genentech, Inc.

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

Qualified applicants should possess the following:

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

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

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

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

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**Agricultural
Research
Service**

United States
Department of
Agriculture

The USDA, Agricultural Research Service, is seeking a **RESEARCH MICROBIOLOGIST/RESEARCH CHEMIST** to conduct research on the identification, biosynthesis, metabolic function, and genetic control of enzyme systems and biopolymers of microbes involved in reducing the bioavailability of cholesterol in food systems. Candidate must have knowledge of microbial physiology and biochemistry, molecular biology and biochemical genetics, including recombinant DNA techniques, chemistry of biopolymers, enzymology, and analytical procedures. Ph.D. is desired. Must be a U.S. Citizen. Salary is commensurate with experience: GS-11/12 (\$27,172-\$42,341). For information on the research program/position, contact Dr. George A. Somkuti, 215-233-6474. For information on application procedures/forms, contact Lee Triplett, 301-344-1863 by December 21, 1987. All applications in response to this advertisement should be marked 7EC0621 and should be received by January 4, 1988.

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WOMEN AND MINORITIES ARE ENCOURAGED
TO APPLY**

IMMUNOLOGY RESEARCH

Senior Scientist

Sandoz Pharmaceuticals Corporation is a leader in immunotherapy products that improve the quality of life. Our developments are the result of research conducted by professionals who specialize in many different fields.

The Sandoz Research Institute is currently seeking an experienced immunologist to play a vital role in research on therapeutic applications of monoclonal antibodies. Our position offers a unique opportunity for an innovative, self-motivated, independent scientist to develop products for diverse areas like immunoregulation and infectious and tumor diseases. The successful candidate will work closely within an inter-disciplinary research team of molecular biologists, immunologists, biochemists and cell biologists.

The requirements of the position include:

- Ph.D. or equivalent, and at least two years' post-doctoral experience, in immunology or related discipline.
- Record of significant publications in major scientific journals.

Positions at Sandoz offer personal satisfaction, professional opportunity/challenge, competitive salaries and an excellent benefits package. Our campus-like facilities are conveniently located in northern New Jersey.

For prompt consideration, please respond to job #381 and forward your resume with salary requirements in confidence to:



Mr. Joseph P. Castellano
Director of Human Resources
**SANDOZ RESEARCH INSTITUTE
SANDOZ PHARMACEUTICALS CORPORATION**
East Hanover, New Jersey 07936

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POSITIONS OPEN

BACTERIAL GENETICIST UNIVERSITY OF MARYLAND

Joint appointment (tenure-track) position is available at the Department of Microbiology, University of Maryland at College Park and the University of Maryland Center for Marine Biotechnology. Faculty member will join research groups with interests centering on DNA methylation, phase variation in *Neisseria*, as well as the molecular biology of marine microorganisms and the control of growth and development in finfish and shellfish.

Applicants should have extensive research experience in bacterial and phage genetics as well as familiarity in the use of recombinant methods for the construction of new genetic variants. Appropriate research areas are control of gene expression, DNA replication and cell division, DNA recombination, and DNA repair.

This appointment will be made at the level of assistant or associate professor. Letters of application, including curriculum vitae, a statement of research interest, names, and addresses of three references should be sent by 30 January 1988, to: **Department of Microbiology/COMB Search Committee, Department of Microbiology, University of Maryland, College Park, MD 20742. The University of Maryland is an Equal Opportunity/Affirmative Action Employer.**

BIOCHEMISTRY FACULTY POSITION UNIVERSITY OF WISCONSIN-MADISON

The Biochemistry Department, University of Wisconsin-Madison invites applications for a tenure-track position at the assistant professor level. We are particularly interested in applications from individuals whose research emphasizes chemical approaches to fundamental problems in biochemistry or molecular biology. Potential areas include enzymology, bioorganic chemistry, the chemistry of proteins, nucleic acids, complex carbohydrates, or of low molecular weight compounds. The successful candidate is expected to develop a vigorous independent research program and participate in the undergraduate and graduate teaching programs of the department. Applications, including curriculum vitae, list of publications, summary of past work and accomplishments, and a statement of plans for future research, should be sent to: **Professor William S. Reznikoff, Chairman, Department of Biochemistry, University of Wisconsin-Madison, 420 Henry Mall, Madison, WI 53706.** In addition, applicants should arrange for three letters of reference to be mailed to the same address. To assure consideration, all application materials should be received by 15 January 1988. *The University is an Affirmative Action/Equal Opportunity Employer, and encourages applications from women and minorities.*

Princeton University is seeking a senior **COGNITIVE PSYCHOLOGIST** for a tenured professorship in the Department of Psychology. Candidates should have a record of productive research on the higher cognitive processes, and should be prepared to teach and supervise at both the undergraduate and graduate level in the general area of cognitive science and specifically in the psychology of language and thought. Applications should be addressed to: **CS Search Committee, Department of Psychology, Green Hall, Princeton University, Princeton, NJ 08544.** Closing date: 15 December 1987. *Princeton University is an Equal Opportunity/Affirmative Action Employer.*

University of Alberta, Division of Biochemistry, Department of Oral Biology. This department in the Faculty of Dentistry, has a tenure-track position available for a **CONNECTIVE-TISSUE BIOCHEMIST**. The appointee will be required to participate in the teaching of biochemistry, and to develop an active research program which could include collaboration with clinicians within the Faculty. The Department enjoys excellent research facilities, including a tissue-culture laboratory, amino acid analyzer, amino acid sequencer and full supporting equipment and services. The successful candidate will hold a Ph.D. in biochemistry, may also have a dental degree, and have proven ability to conduct independent research. Rank and salary will be commensurate with experience; assistant professor: \$31,612 to \$45,340 or associate professor: \$39,620 to \$57,236. *The University of Alberta is committed to the principle of equity in employment.* Applications, to be received no later than 29 February 1988, including a curriculum vitae and the names of three referees, should be sent to: **Dr. D. Paton, Chairman, Department of Oral Biology, University of Alberta, Edmonton, Alberta T6G 2N8.**

POSITIONS OPEN

BIOCHEMISTS

Tenure-track faculty positions are available for interested candidates who have expertise in the following areas: (i) Large DNA viruses (**Dr. J. Engler**); (ii) Extracellular matrix molecular biology (**Dr. J. Esko**); (iii) Dental biochemistry (**Dr. H. Birkedal-Hansen**); (iv) Molecular endocrinology (**Dr. P. Higgins**).

Candidates should be interested in developing strong and independent research programs with long-term growth potential. The Department of Biochemistry has excellent facilities and is undergoing substantial expansion. Teaching includes medical, dental, and graduate students within a sizable medical complex. Salary is commensurate with experience. Curriculum vitae, brief statement of present and future research interests, and three letters of recommendation should be sent to the appropriate contact person (listed above) at the following address: **c/o Faculty Search Committee, Department of Biochemistry, The University of Alabama at Birmingham, University Station, Birmingham, AL 35294. An Equal Opportunity/Affirmative Action Employer.**

CELL PHYSIOLOGIST

Tenure-track position for fall 1988 at the rank of associate or full professor. Ph.D. in physiology and postdoctoral experience are required. Candidates must have a demonstrated record of independent research and ability to obtain funding for research. Submit application to: **Dr. Rajen Anand, Chair, Anatomy and Physiology, California State University, Long Beach, CA 90840** by 15 January 1988. *CSULB is an Equal Opportunity/Affirmative Action Employer.*

CHAIRPERSON DEPARTMENT OF PHYSIOLOGY

The Uniformed Services University of the Health Sciences (USUHS) is conducting a search for Chairperson of the Department of Physiology of the F. Edward Hebert School of Medicine. Candidates should have an earned doctoral degree in physiology or a related field, a distinguished record of research, substantial experience in teaching (preferably in medical school), and demonstrated leadership and administrative ability. The position will be available by 1 July 1988; starting date is negotiable. Salary will be commensurate with qualifications. All applications received by 1 February 1988 will be considered, but the position will remain open and applications will be accepted until an appointment is made. Candidates should submit curriculum vitae and bibliography, statement of research interests and teaching philosophy, and names of three professional references to: **Chairperson, Physiology Search Committee, c/o Civilian Personnel Directorate, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814. USUHS is an Equal Opportunity/Affirmative Action Employer.**

DEVELOPMENTAL BIOLOGIST

The University of Tulsa seeks a tenure-track developmental biologist. Rank open. Postdoctoral experience preferred. The successful candidate will be an integral part of new Ph.D. program in biotechnology. Externally funded research is expected in the molecular/cellular aspects of developmental biology. The university provides generous start-up funds and a renovated laboratory. Undergraduate and graduate teaching is required. Submit curriculum vitae, research interests and goals, reprints, and three letters of reference to: **Dr. Barbara Shirley, Biological Sciences, The University of Tulsa, Tulsa, OK 74104.** Consideration of applications begins 31 December 1987. *Affirmative Action/Equal Employment Opportunity.*

ECOLOGY: Recent Ph.D. with commitment to quality undergraduate teaching and liberal arts philosophy, for tenure-track **ASSISTANT PROFESSOR** position beginning 1 September 1988. Responsibilities include teaching ecology, invertebrate biology, parasitology, and introductory biology. Instrumentation familiarity essential. Research involving students will be encouraged. Send résumé, graduate transcripts, and three letters of recommendation by 15 December 1987 to: **Donald W. Tappa, Vice President for Academic Affairs, Carroll College, Waukesha, WI 53186.**

POSITIONS OPEN

Applications or nominations are invited for appointment as **CHAIRPERSON, DEPARTMENT OF GENETICS**, Stanford University School of Medicine. The Department of Genetics maintains an active program of research in general genetics as well as human genetics, and is responsible for the teaching of genetics to medical students. Candidates are sought who have an outstanding record of research and who possess qualities of leadership needed to head a department in this active field.

A letter of application should be accompanied by curriculum vitae and the names of three references. Inquiries, applications and nominations should be addressed to: **Dr. Dale Kaiser, Department of Biochemistry, Stanford University, Stanford, CA 94305-5307.**

Stanford Medical School is committed to increasing representation of women and members of minority groups among its faculty and encourage application from such candidates.

CHAIRPERSON DEPARTMENT OF PHARMACOLOGY

The University of Nebraska College of Medicine is seeking a nationally recognized investigator to fill the position of Chairperson of the Department of Pharmacology. The candidates should have an earned doctoral degree in pharmacology or related area, a distinguished record in research which is currently active and funded, strong leadership qualities and a major interest in the education of health professionals. Interested applicants should submit curriculum vitae and the names and addresses of three references to: **Office of the Dean, Attention: Chairman, Pharmacology Search Committee, University of Nebraska College of Medicine, Room 5025, Wittson Hall, 42nd and Dewey Avenue, Omaha, NE 68105.** The closing date for applications is 15 January 1988. *The University of Nebraska Medical Center is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

DEPARTMENT CHAIR GROWTH AND DEVELOPMENT

Applications are being accepted for a full-time, tenured position as Professor and Chairperson, Department of Growth and Development, School of Dentistry, University of California, San Francisco. Applicants must have a D.D.S. or equivalent professional degree, graduate academic education, academic and administrative experience, and a substantial record of past and current research. Clinical expertise in craniofacial anomalies, pediatric dentistry, orthodontics or an allied clinical discipline is desirable. Responsibilities include administration of the department and its teaching and patient care programs, and research leadership. Salary commensurate with qualifications and experience. Send current curriculum vitae or inquiries to: **Dr. Troy Daniels, Chair, Search Committee, School of Dentistry S-524, University of California, San Francisco, CA 94143.** Review of applications will begin 1 January 1988 and continue until filled. *UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

ENTOMOLOGIST ASSOCIATE PROFESSOR/PROFESSOR AND CURATOR

Entomologist with broad background and broad interests in insect systematics and biology of insects to: (i) continue active research in systematic entomology and guide research of graduate students, (ii) teach basic entomology course, possibly others in specialty, (iii) serve a term as Director and Curator of Snow Entomological Museum. Required qualifications: Ph.D. and appropriate subsequent experience (e.g., assistant professor or assistant curator), specialization in insect systematics, ability to communicate information and ideas effectively. Tenured or tenure-track position, 11-month salary (with 1 month leave), depending on rank and experience. Begin 16 August 1988. Send statement of teaching and research interests and experience, administrative experience if any, and curriculum vitae, including list of publications and several representative publications, and addresses of five appropriate references to: **Dr. William J. Bell, Chairman, Department of Entomology, University of Kansas, Lawrence, KS 66045; (Telephone: 913-864-4578),** by 15 January 1988. *The University of Kansas is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ENVIRONMENTAL/ RESOURCE ECONOMIST TENURE-TRACK

The University of Illinois has one tenure-track opening at the assistant professor level or higher. The opening is in the Institute for Environmental Studies; it is anticipated that the position will be joint with an appropriate degree-granting disciplinary department, such as economics or agricultural economics. The position requires strong disciplinary skills, an appropriate research focus and an interest in interdisciplinary/multi-disciplinary research. Ph.D. required in either agricultural economics, economics or related field. The faculty member will have leadership and development responsibilities for disciplinary and interdisciplinary environmentally related research programs as well as teaching responsibilities (approximately one course per semester). The Institute for Environmental Studies provides a campus-wide focus for environmental research and teaching, with faculty from agricultural economics, chemistry, engineering, economics, sciences. Salary open. Apply: C. D. Kolstad, Institute for Environmental Studies, University of Illinois, 408 South Goodwin Avenue, Urbana, IL 61801. Applications should be received by 15 January 1988.

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

FACULTY POSITION—CLINICAL CHEMIST:

The Chemistry Department at Cleveland State University will fill a faculty position in clinical chemistry. Salary and rank are open and depend upon background and experience. Ph.D. degree in chemistry or biochemistry required. Candidates will, if they desire, also be considered for appointment as director of the clinical chemistry program. For senior level candidates, certification by the American Board of Clinical Chemistry is desired but not essential. Responsibilities will include teaching at both graduate and undergraduate levels and establishment of a vigorous research program. Position available 1 September 1988. Deadline for applications is 1 January 1988. Send curriculum vitae and three letters of recommendation to: Roger W. Binkley, Ph.D., Chairman Clinical Chemistry Search Committee, Department of Chemistry, Cleveland State University, East 24th and Euclid Avenue, Cleveland, OH 44115. *Equal Opportunity Employer M/F/H.*

FACULTY POSITIONS AVAILABLE IN BIOMEDICAL ENGINEERING AT NORTHWESTERN UNIVERSITY

The Biomedical Engineering Department has two tenure-track positions in physiological modelling or bio-instrumentation or biomechanics for assistant professors with an engineering background. Applicants should submit by 1 February 1988: curriculum vitae, outlines of future research plans and teaching interests, and names and addresses of at least three references to: A. E. Kertesz, Chairman, Biomedical Engineering Department, Northwestern University, Evanston, IL 60208. *Northwestern is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITIONS DEPARTMENT OF PHARMACOLOGY

The Department of Pharmacology at Wayne State University School of Medicine invites applications for several tenure-track faculty positions at the assistant, associate, or full professor level. Applicants should have a Ph.D. or M.D., significant postdoctoral experience, and excellent research accomplishment. We are seeking outstanding individuals with research interests in any area of modern pharmacology including biochemical pharmacology, carcinogenesis, cancer biology, and toxicology. Faculty members are expected to establish vigorous independent research programs and to participate in teaching medical, graduate, and postdoctoral students. Send curriculum vitae, summary of current research activities and future research plans, and names of three professional references to: Professor Paul F. Hollenberg, Chairman, Department of Pharmacology, Wayne State University School of Medicine, 540 East Canfield, Detroit, MI 48201. Deadline for applications is 15 February 1988. *Wayne State University is an Equal Opportunity/Affirmative Action Employer.*

27 NOVEMBER 1987

DIRECTOR, JOHN E. FOGARTY INTERNATIONAL CENTER FOR ADVANCED STUDY IN THE HEALTH SCIENCES NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH AND HUMAN SERVICES

The National Institutes of Health invites nominations and applications for the position of Director, John E. Fogarty International Center for Advanced Study in the Health Sciences (FIC). The Center provides the facility for the assembly of scientists and leaders in the biomedical, behavioral, and related fields for discussion, study, and research in the health sciences at an international level; conceives, designs, develops, and conducts studies on current and emerging international health issues; awards scholarships to outstanding individuals for the purpose of encouraging creative, speculative thought and contributions to advanced study; awards fellowships for collaborative research in the United States and abroad; facilitates and coordinates NIH activities and functions concerned generally with the health sciences at the international level; provides a central point for receiving, assisting, and/or briefing special foreign visitors to NIH; provides administrative support to the NIH Visiting Program; and provides interface between NIH and other agencies and international organizations.

This is a Civil Service position in the Senior Executive Service (SES), with an authorized salary range from \$64,700 to \$73,400 per annum (currently limited to \$99,500) depending on qualifications. Candidates may be eligible for Physicians Comparability Allowance up to \$20,000 per year. Alternately, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service. The SES individual selected, if not presently in the SES, must serve a one-year probationary period.

The mandatory qualifications are: (1) meet the minimum educational requirements for Medical Officer, GS-602, or Health Scientist Administrator, GS-601 (or equivalent combination of experience and education), as defined in the U.S. Office of Personnel Management Handbook X-118, Qualification Standards for Positions under the General Schedule, which is available in Federal Personnel Offices and Federal Job Information Centers; and (2) have knowledge of research programs in the biomedical sciences and international health activities. In addition, candidates must meet the following managerial/executive qualifications: Demonstrated competence to assume leadership responsibilities in: (1) assuring that key national and agency goals, priorities, and values are considered in making program decisions; (2) establishing effective external communications by being a representative spokesperson for the organization, and maintaining working relationships within the organization and with outside key individuals and groups; (3) developing policy, directing and guiding programs and projects, including establishing short-term and long-term goals and priorities, and the structure and processes necessary to carry them out; (4) obtaining and allocating the fiscal and material resources necessary to support program or policy implementation; (5) developing processes and overseeing activities to assure that people are appropriately employed, effectively and efficiently utilized, and dealt with in a fair and equitable manner; and (6) developing activities and procedures to assure that program and policy are being executed, adjusted as necessary, and that the appropriate results are being achieved.

Candidates who meet the mandatory requirements will be further evaluated by the Search Committee on the following factors: communications and interpersonal skills, education; honors and awards; and the degree to which they exceed the minimally qualified level of the mandatory managerial/executive qualifications. Information on any of the above requirements may be obtained by calling Mrs. Helen C. Stafford, Executive Secretary, Search Committee for Director, FIC, at (301) 496-4197.

Applications for Federal Employment, (SF-171) are to be sent to Mrs. Helen C. Stafford, Executive Secretary, Search Committee for Director, FIC, National Institutes of Health, Building 1, Room 22, 9000 Rockville Pike, Bethesda, Maryland 20892. A current curriculum vitae and bibliography must accompany all applications. Applications of women and/or minority group members are especially solicited.



NATIONAL INSTITUTES OF HEALTH
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BIOCHEMICAL TOXICOLOGIST

Ayerst Laboratories Animal Health Division located in Chazy, New York has an opening for a professional with broad based experience/education in Biochemistry & Toxicology. Candidates should hold a recent PhD or possess equivalent experience. Responsibilities include scientific administration of clinical laboratory analysis for drug safety assessment, supervision of special biochemical toxicology studies as well as general toxicology study director responsibilities. Familiarity with principles of pharmacokinetics is desirable.

We are located in the scenic Adirondack Mountain, Lake Champlain Region of New York State within a short drive from Montreal and the Lake Placid Olympic area. We offer a competitive starting salary with full benefits including dental, prescription, relocation and interview expenses.

Send resume and salary history in confidence to:

Gary D. Wagoner, Personnel Manager

Ayerst

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Opportunities in Molecular Genetics

Pfizer Central Research is seeking qualified professionals to fill several openings in the Department of Molecular Genetics. Working with other specialists in a multi-disciplinary project team, you will conduct original research experiments, applying your skills to exploratory biomedical research projects involving molecular genetics approaches.

These positions require either an MS or BS in an appropriate biological or chemical discipline with additional postgraduate experience in one or more of the following areas:

- mRNA isolation, cDNA library construction
- chemical analysis of protein sequence and structure
- synthesis, cloning and characterization of synthetic DNA
- mammalian cell culture/transcription regulation

In addition to a stimulating scientific environment, we offer a competitive compensation/benefit package and relocation assistance to an attractive southeastern Connecticut shore community. Please send a resume, description of research experience and names of three references to: Mrs. Lorraine C. Corr, Personnel Associate, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.



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POSTDOCTORAL CANDIDATES

THE LIFE SCIENCES DIVISION AT THE LOS ALAMOS NATIONAL LABORATORY is seeking a postdoctoral candidate for our Bioelectromagnetics Program. Program emphasis is on mechanisms of interaction between electromagnetic fields and biological systems. Possible research areas include cell biology, behavioral pharmacology and endocrine physiology. A strong background in physics, mathematics and biology is desirable.

Candidates should hold a Ph.D. in a relevant discipline and be no more than three years past their degree. Interested candidates should send a copy of their CV to Dr. Dennis L. Hjeresen, LS-1, MS M882, Los Alamos National Laboratory, Los Alamos, New Mexico 87545.

TO FORMALLY APPLY, send resume, employment application, three letters of reference, and graduate and undergraduate transcripts to Carol M. Rich, Human Resources Development Division PD-87-004, Los Alamos National Laboratory, Los Alamos, New Mexico 87545.

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University of California

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RESEARCH OPPORTUNITIES
IN
PLANT GENETIC ENGINEERING

The Dow Chemical Company, in Midland, Michigan, is a recognized global leader in the agricultural chemical industry. Expanded research efforts in the area of plant genetic engineering have created an immediate need within the Biotechnology Laboratory in the Central Research Department for qualified researchers in the following areas:

**PLANT MOLECULAR BIOLOGY/
GENE CLONING**

The successful candidate will have a Ph.D. in molecular genetics. Some experience in cDNA cloning, preparation and screening of genomic libraries, eukaryotic expression vectors, and DNA sequencing is preferred. Research efforts will be directed toward introduction of genes into crop plants, with an increasing emphasis on commercially important monocots.

The above candidate must also possess strong communications skills and a desire to carry out independent research while functioning as part of an interdisciplinary research team.

The Dow Chemical Company offers a stimulating work environment and a competitive salary and benefits package.

Send resume to:

Technical Recruiting
Department BT-7
P.O. Box 1655
Midland, MI 48641-1655



The Dow Chemical Company is an Equal Opportunity Employer

**POSTDOCTORAL SCIENTIST
EXPLORATORY RESEARCH**

Amgen is a dynamic and growing organization that is a recognized leader in recombinant DNA technology. Our leadership in developing erythropoietin and other products for human therapeutics, human diagnostics, animal health care and specialty chemicals has placed us firmly in the forefront of the industry. We currently have an opportunity for a Postdoctoral Scientist to contribute to our Exploratory Research Group.

Qualified candidates will have a Ph.D. in the avian molecular biology of growth physiology or disease resistance or a Ph.D. in the mammalian molecular biology of lipid metabolism, hematology, endocrinology or immunomodulators.

Amgen offers a stimulating and challenging research environment as well as an attractive location (about an hour northwest of Los Angeles). **Amgen** also offer a competitive compensation and benefits package. Qualified applicants should send a resume, in confidence, to:

Recruitment, Dept. #113

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1900 Oak Terrace Lane
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**DIRECTOR
SCIENTIFIC AND MEDICAL AFFAIRS**
CITY OF HOPE NATIONAL MEDICAL CENTER
AND
BECKMAN RESEARCH INSTITUTE OF THE CITY OF HOPE

The City of Hope National Medical Center and its affiliated Beckman Research Institute seek an established physician-scientist to serve as Director of Scientific and Medical Affairs. The City of Hope, located on a 90-acre campus in suburban Los Angeles, is a 75-year old research institution that consists of a 212-bed medical center with a major focus in cancer research, and the Beckman Research Institute that is comprised of basic science groups in molecular biology, immunology, and neurosciences. The Medical Center and Beckman Research Institute are staffed by a full-time faculty of over 150 doctoral level investigators.

The City of Hope invites applications from senior physician-scientists who have a distinguished record of achievement in laboratory and clinical investigation as well as patient care and an excellent background in scientific or hospital administration. The successful candidate will be responsible for the operational management of all Medical Center and Beckman Research Institute departments and divisions and will report directly to the President and Chief Executive Officer of the City of Hope. Appointment at the full professor equivalent rank is expected. Applications should include a letter of inquiry, curriculum vitae, and the names of at least four supporting references, and should be addressed to **James H. Doroshov, M.D., Chairman, Director of Scientific and Medical Affairs Search Committee, City of Hope National Medical Center, 1500 East Duarte Road, Duarte CA 91010.**

The City of Hope is an equal opportunity/affirmative action employer.

POSITIONS OPEN

FACULTY POSITION DEPARTMENT OF MEDICAL BIOCHEMISTRY AND GENETICS

Search Reopened. The Department of Medical Biochemistry and Genetics invites applications for one junior and one senior level, tenure-track faculty position. Salary and rank are open and dependent upon qualifications. As part of a rapidly expanding research community, candidates are expected to establish or maintain a vigorous research program and participate in medical and graduate instruction. Applications from individuals with research interests in any area of biochemistry or molecular genetics are encouraged. Submit curriculum vitae, description of research interests, and names of three references to: **Dr. Garret Ihler, Department of Medical Biochemistry and Genetics, College of Medicine, Texas A&M University, College Station, TX 77843-1112. Equal Opportunity/Affirmative Action Employer.**

FACULTY POSITION—GENETICS. Tenure-track assistant professor, starting fall 1988. Teaching includes a general genetics course; participation in introductory biology course; two alternate-year courses, at least one of which should be microbiology, development, or immunology. Research involving undergraduates is encouraged. Ph.D. required; teaching experience desirable. Submit résumé and three letters of reference by 15 December 1987 to: **Dr. Margaret Simpson, Chairman, Department of Biology, Sweet Briar College, Sweet Briar, VA 24595. Affirmative Action/Equal Opportunity Employer.**

FACULTY POSITION IN IMMUNOLOGY UNIVERSITY OF MARYLAND

A tenure-track joint appointment in immunology is available in the Center of Marine Biotechnology of the University of Maryland (COMB), and the Department of Biological Sciences, University of Maryland Baltimore County (UMBC). Candidates should have at least 2 years of postdoctoral experience, and are expected to establish a vigorous, externally funded research program in an area of immunology relevant to marine biology. The successful candidate will be responsible for developing and maintaining a hybridoma research facility at COMB and will teach a graduate level course in hybridoma technology at UMBC. Both COMB and UMBC have state-of-the-art research and instructional facilities and are located in the Baltimore metropolitan area. Applications, including curriculum vitae, a statement of research interests, and names and addresses of three references should be sent to: **Dr. T. T. Chen, Center of Marine Biotechnology, University of Maryland, 600 East Lombard Street, Baltimore, MD 21202 by 1 February 1988. The University of Maryland is an Equal Opportunity Affirmative Action Employer. Qualified minorities and women are urged to apply.**

FACULTY POSITIONS IN BIOLOGICAL SCIENCES

The Department of Biological Sciences, San Jose State University (SJSU), invites applications for three tenure-track positions, at the assistant professor level, to begin August 1988. Applicants must have an earned doctorate and teaching experience. Postdoctoral research experience desired. Significant professional contributions expected. All positions include teaching general education science, advising undergraduate and/or graduate students, and participation in the master's degree program. (1) **BIOMETRICIAN.** Candidate should have a broad background in experimental design, biostatistics, and computer applications, including simulation and modeling, and will teach biometry and computer applications in biology. (2) **HUMAN ANATOMIST/PHYSIOLOGIST.** Candidate will teach introductory and advanced courses in human anatomy and physiology. (3) **SCIENCE EDUCATOR/BIOLOGIST.** Candidate will teach courses in secondary science methods and biological speciality, supervise secondary science students, and continue biological or educational research. Experience in secondary science teaching and supervision is preferred. Completed applications, with transcripts, curriculum vitae, statement of professional goals, and three letters of reference must be sent by 15 January 1988 to: **Dr. Wayne Savage, Chairman, Department of Biological Sciences, San Jose State University, San Jose, CA 95192. SJSU is an Equal Opportunity/Affirmative Action/Title IX Employer.**

Faculty Positions In Neuroscience

The Medical College of Wisconsin is committed to a major expansion in the area of neurosciences. Recruitment is underway for several new positions for an interdepartmental neuroscience laboratory to be based in a new research building. Tenure track appointments will be made at the assistant or associate professor level. Area of research interest is open but preference may be given to those whose interests extend existing strengths in the various basic and clinical science departments of the college. These include ongoing programs in the visual system, CNS regulation of hemodynamics, membrane biophysics, synaptogenesis, developmental neurobiology, cytodifferentiation and plasticity, neurochemistry, neuropharmacology of abused drugs, and nerve-muscle interactions. Applicants should plan to develop vigorous, independent research programs yet also be open to collaboration. We are particularly interested in individuals who utilize a variety of technical and conceptual approaches that might include in situ or in vitro single cell microelectrode recording, electron microscopy, and eukaryotic cellular biology. Since active recruitment is also occurring for the molecular biology laboratory, individuals with interests in neuromolecular biology or immunology are particularly encouraged to apply. Significant start-up or supplemental research funds and laboratory space are available. Teaching will be in medical or graduate courses. Applicants should send a curriculum vitae, a description of current research, future plans, and the names of three references by February 1, 1988 to:

Dr. F. David Anderson, Chairman
Interdepartmental Search
Committee for Neurosciences
Medical College of Wisconsin
8701 Watertown Plank Road
Milwaukee, Wisconsin 53226

The Medical College of Wisconsin is an equal opportunity employer. Women and minorities are encouraged to apply.



Tenure Track Positions in Molecular Biology

The Medical College of Wisconsin is recruiting 5-6 new faculty members at the assistant or associate professor level. These investigators will be based in a new six-story research building currently under construction on the Milwaukee Regional Medical Center Campus which will facilitate interdisciplinary interactions and permit the development of a molecular biology affinity group. The institution provides a number of shared instrumentation facilities (including protein sequencing, oligonucleotide synthesizing, cell sorting, and x-ray diffractometry, among others) and is continuing to expand its armamentarium for macromolecular characterization and synthesis. As the search represents an interdepartmental effort, a wide range of research interests is included: human and microbial genetics, eucaryotic gene expression, oncogenesis, angiogenesis, development, differentiation, and structure-function relationships at the submolecular level.

Applicants with a PhD and/or MD degree and relevant postdoctoral experience should be prepared to present research plans for vigorous, independent programs leading to the solution of meaningful biological problems. Significant start-up and supplemental research funds and generous laboratory space will be available for each successful candidate. Tenure-track appointments will be made in the departments appropriate to the applicants' disciplines.

Interested candidates should send a curriculum vitae, including a complete bibliography, a detailed description of current and/or proposed research and the names and addresses of at least three references by January 15, 1988.

Interdepartmental Search Committee
for Molecular Biology
Office of the Dean and
Academic Vice President
Medical College of Wisconsin
8701 Watertown Plank Road
Milwaukee, Wisconsin 53226

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PRECLINICAL RESEARCH

Senior Toxicologist

Sandoz Pharmaceuticals Corporation is responsible for products that improve the quality of life. Our developments are the result of research conducted by professionals who specialize in many different fields.

The Sandoz Research Institute is currently seeking a Senior Scientist who will manage contracts for acute, subchronic and chronic toxicologic and pathologic tests to be performed outside of SRI's preclinical safety assessment research facilities. Responsibilities will include writing of protocols, preparation of contracts for execution of studies as well as interpretation of the derived data. The successful candidate will also serve as an in-life investigator for studies performed within SRI as necessary.

Ph.D. or D.Sc. degree in Pharmacology or Toxicology is required, plus three to five years' experience as a Toxicologist in a chemical or pharmaceutical industry. Strong interpersonal and communication skills are essential in order to interface effectively with scientific and non-scientific personnel. Basic understanding and use of statistics are also necessary as well as willingness to travel up to 30% of the time.

Positions at Sandoz offer personal satisfaction, professional opportunity/challenge, competitive salaries and an excellent benefits package. Our campus-like facilities are conveniently located in northern New Jersey.

For prompt consideration, please respond to job #370 and forward your resume with salary requirements in confidence to:



Mr. Joseph P. Castellano
Director of Human Resources
SANDOZ RESEARCH INSTITUTE
SANDOZ
PHARMACEUTICALS CORPORATION
East Hanover, New Jersey 07936

An Equal Opportunity Employer M/F/H/V



IDEON CORPORATION is a new biotechnology research and development company located in Redwood City, CA. IDEON's research focuses on the development of products using anti-idiotypic monoclonal antibodies and novel immunomodulators. Ideon is seeking experienced scientists to play key roles in building this exciting new enterprise.

IMMUNOCHEMIST — Ph.D. in Biochemistry or Immunology with 3+ years of post-doctoral experience. Expertise in the chemistry of antibodies and peptide antigens, immunoassays and contemporary monoclonal antibody technologies.

MOLECULAR IMMUNOLOGIST — Ph.D. in Molecular Biology or Immunology with 3+ years of post-doctoral experience. Expertise in the molecular biology of immunoglobulins and/or immunoregulatory molecules.

Qualified candidates will have an opportunity to join a start-up company with the added strength of pharmaceutical manufacturing capability provided by IDEON's affiliation with INVITRON CORP. IDEON CORPORATION offers excellent salary, equity participation, and other benefits. An equal opportunity employer.

For confidential consideration, please forward your C.V. and a list of three references to IDEON CORPORATION, Attn: R&D Department, 515 Galveston Drive, Redwood City, CA 94063.

BIOPROCESSING OPPORTUNITIES

Angio-Medical Corp., a leader in Science & Technology of Lipid Angiogenesis, is establishing a state-of-the-art Bioprocessing Center in Massachusetts (suburb of Boston) to conduct research and produce fine biochemicals from animal tissues. We are seeking highly qualified U.S. citizens or permanent residents with excellent communication skills and the ability to work as a team to immediately fill the following positions:

DIRECTOR OF PRODUCTION — PILOT PLANT

Highly motivated candidate should have Ph.D./M.S. in Bioengineering/Bioscience or related areas and 5 years of industrial experience in pilot-plant production of biochemicals. Position is responsible for scaling up, and reliable continuous production and packaging of biochemicals.

R & D ASSISTANT SCIENTIST

Result-oriented candidate should have M.S./B.S. in Biochemistry/Bioscience and 5 years of R & D experience in isolation and purification of various classes of lipids from animal tissues. Demonstrated skills in modern methods of bioseparation including chromatography (HPLC, gel filtration, ion exchange, affinity, etc.), electrophoresis, and optical techniques is a must. Knowledge of structural determination techniques (MS, NMR, etc.) is a plus.

Q.C./PRODUCTION ASSISTANT SCIENTIST

Energetic candidate should have M.S./B.S. in chemistry/biochemistry or related field and 3 to 5 years of Q.C. experience with pharmaceutical or related industries. Strong background in statistical analysis is desirable.

Angio-Medical Corp. offers a competitive salary and a benefit package including stock options, relocation assistance, and medical and health insurance as well as a productive and stimulating working environment. Applicants should send a resume and the names of three references to:

Dr. Ahmad Reza Kamareh
V.P., Bioprocessing Operations
Angio-Medical Corp.
1350 Avenue of the Americas
Suite 1803
New York, New York 10019



SHOWA UNIVERSITY RESEARCH INSTITUTE FOR BIOMEDICINE announces the establishment of a Department of Cellular Biochemistry. The Institute, which is non-profit, is seeking a highly motivated **SENIOR INVESTIGATOR** with established leadership capabilities to serve as Chairman. This department, which will occupy approximately 8,000 sq. feet of laboratory space, will be comprised of five independent laboratory programs in the general area of cancer biology with particular emphasis being placed on the characterization of underlying mechanisms at the molecular genetic level. Investigations in this department will complement studies in the already established Departments of Virology and Molecular Genetics.

Showa University Research Institute is unique in its affiliation with a major Japanese medical university. The Institute is based in a new facility with excellent individual laboratory and office space and centralized services, including a biotechnology laboratory. Its central location within the rapidly growing Tampa Bay area is most attractive. Investigators are allowed complete freedom to pursue research goals and while generous program support is provided, scientists are expected to secure extramural funding. An internationally recognized group of scientists comprise the Scientific Advisory Board.

Institute professional staff hold academic ranks at the University of South Florida. A full range of pre-doctoral and postdoctoral training programs involving the Institute, Showa University Medical School in Tokyo and the University of South Florida are ongoing as are collaborative relationships with Bay area hospitals and clinics.

Individuals interested in the position should send their curriculum vitae, a list of publications and the names of five references to: **Chairman, Search Committee, Showa University Research Institute for Biomedicine, 10900 Roosevelt Boulevard, St. Petersburg, Florida 33716.**

A not-for-profit organization/equal opportunity employer.

Positions in

Plant Molecular and Cellular Biology

The Samuel Roberts Noble Foundation is inviting applications for a number of staff scientist, post-doctoral, and technical positions in the newly-formed **PLANT BIOLOGY DIVISION**. The Plant Biology Division has as a central goal the application of modern molecular biology for the improvement of crop plants based on an understanding of the fundamental molecular mechanisms underlying the response of plants to environmental factors.

Initially it will be developing programs in molecular and cellular biology related to plant-stress and -pathogen interactions and in plant gene-transfer and regeneration. Applicants with experience in molecular genetics, enzymology, plant cell culture or transformation should send two copies of a curriculum vitae, three letters of recommendation, and brief summaries of ongoing and future research interests to Dr. Richard Dixon whose address until February 1, 1988, is:

Dr. Richard Dixon
Department of Biochemistry
Royal Holloway and Bedford New College
University of London
Egham Hill, Egham, Surrey TW20 DEX, U.K.
(telephone 0784 34455 ext. 3545)

Positions will be available from April 1, 1988.

The Samuel Roberts Noble Foundation is a privately-funded research foundation situated in Ardmore, Oklahoma, USA.

THE NOBLE FOUNDATION

an equal opportunity/affirmative action employer.

Plant Biology Division P.O. Box 2180 Ardmore, OK 73402

MANAGER OF MEDICAL RESEARCH Hepatitis/AIDS

Abbott Laboratories has achieved broad recognition not only for exceptional, results-oriented management, but also for the on-going research and development efforts of our world leading Diagnostics Division. With our success in the tests for detection of Hepatitis B, Rubella, German Measles and most recently, AIDS, we continue to make vital scientific inroads. We now seek an individual to coordinate worldwide activities in the area of AIDS, Hepatitis and other infectious diseases.

Responsibilities include managing research consultants, coordinating a research budget associated with collaborative agreements, reviewing advertising and marketing campaigns targeted at physician audiences and scientists, and presenting scientific data worldwide. A strong background and direct experience with AIDS and other infectious diseases is required, along with a specialization in one or more fields such as immunology, hematology or molecular biology. A strong knowledge of the biological aspects and history of AIDS and Hepatitis is also required. An M.D. or Ph.D. is preferred.

Abbott is recognized by Dun's Magazine as one of the nation's 5 best managed companies for 1986. We're headquartered in an attractive suburban area on the Lake Michigan shoreline 30 miles north of Chicago. In addition to an outstanding scientific environment, we provide excellent salaries, and full benefits including profit sharing, stock retirement plan, and relocation assistance, as well as exceptional opportunities for professional growth. For confidential consideration, please send your resume with salary history to: **Peggy Taylor/Corporate Placement, Dept. SCI/11-27.** Abbott is an Affirmative Action Employer.

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"Health Care Worldwide"

Plant Molecular Biologist

American Cyanamid Company's Agricultural Research Division has an opening in its expanding Plant Biotechnology program for individuals at the B.S., M.S., and Ph.D. levels in the areas of plant tissue culture and molecular biology. Applicants should have experience in cereal tissue culture, plant transformation systems, gene isolation, and/or the analysis of gene expression in higher plants.

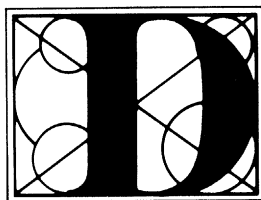
American Cyanamid offers a competitive compensation and benefits package. For prompt and confidential consideration, forward your resume, an outline of research interests, career goals and the names and addresses of three references to the Employment Office.



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

An Equal Opportunity Employer M/F/H

Ph.D. Microbiologist/ Biochemist



What will you
discover
when you join Lederle?

At Lederle Laboratories, a leading manufacturer of pharmaceuticals, you'll discover that we're dedicated to research in infectious diseases. We currently seek a Ph.D. Microbiologist/Biochemist to help further our efforts.

The selected candidate will have 2+ years' postdoctoral experience and a research background in intermediary metabolism and/or macromolecular synthesis. Expertise in the isolation and assay of microbial enzymes is desired.

Lederle offers excellent benefits and salaries in a professional work environment at our campus-like setting in Rockland County, New York. For consideration, please send your curriculum vitae, in confidence, to: Maureen Quigley, Professional Employment Representative, Lederle Laboratories, American Cyanamid Company, Pearl River, NY 10965. We Are An Equal Opportunity Employer.



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Since 1906**



**Murdoch
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PERTH
WESTERN AUSTRALIA

**INSTITUTE FOR SCIENCE
AND TECHNOLOGY POLICY**

DIRECTOR

Applications and nominations are invited for a tenured senior position at the level of Professor or Associate Professor in the field of Science and Technology Policy. For an initial period of five years, and with the possibility of extension, the appointee will be Director of the Institute for Science and Technology Policy being established at the University under a substantial grant from the Government of Western Australia. The Institute will be responsible for policy-related research on science and technology strategy issues and for the investigation of broad issues related to science, technology and society, it will also be involved in post-graduate education in these fields. The Director will be responsible for the work of contract research staff and administrative personnel, as well as for the dissemination of research information to industry, government and the public.

Candidates should have proven experience in science and technology policy. Ability to lead an innovative research group and to liaise with industry, government and universities is essential. The University welcomes applications from individuals with relevant experience in industry and government as well as from scholars in universities and policy institutes.

SALARY: Associate Professor — \$A49,790 p.a.
Professor — \$A58,870 p.a.

Details of the proposed Institute and conditions of appointment are available from:

**The Personnel Officer,
Murdoch University, South Street,
Murdoch, Western Australia 6150
Telephone (09) 332 2283. Fax 011 61 09 332 2507.**

The closing date for formal applications is 11 December 1987.

GRADUATE PROGRAMS IN BIOLOGY

Department of Biology Texas A&M University

The Department of Biology at Texas A&M has vigorous research programs in many exciting and competitive areas of the Biological Sciences. Research interests include: cell and molecular biology of development in plants, animals and protists; molecular genetics of unicellular eukaryotes, prokaryotes and viruses; animal behavior and physiology; systematics and ecology of plants and animals. Research groups are highly interactive within the department, and many of our faculty participate in campus-wide activities such as the Molecular and Cell Biology Program and the Faculties of Genetics and Plant Physiology. Laboratories are modern and well-equipped. Other resources include an EM and Light Microscopy Center, an Advanced DNA Technologies Laboratory, a Marine and Freshwater Aquatics Center and facilities for the production and analysis of transgenic plants. Field work in marine biology is coordinated through Texas A&M University at Galveston.

The department offers M.S. and Ph.D. degrees in Biology, Botany, Microbiology and Zoology. Students are invited to apply for a limited number of Graduate Research Fellowships and Assistantships. Additional support is available through departmental teaching assistantships and principal investigator funded research assistantships. Postdoctoral opportunities are available in certain areas, especially for individuals having graduate research experience in recombinant DNA and plant and animal tissue culture techniques.

For additional information, contact:

Graduate Recruiting and Admissions, Department of Biology, Texas A&M University, College Station, TX 77843 Phone: (409) 845-7755

Texas A&M University is an equal opportunity employer

Opportunities in Biological Process Sciences

The Department of Biological Process Sciences at Smith Kline & French Laboratories, located in suburban Philadelphia, Pennsylvania, is seeking research scientists interested in studying the impact of microbial physiology on the production of heterologous gene products. The following positions are presently available.

Postdoctoral Scientist, Microbiology/Genetics

Position is available immediately to study the production of proteases in *Streptomyces* sp. Special attention will be paid to the role of proteases in accumulation of recombinant DNA products. Candidates for this position should have a strong background in microbial physiology, enzyme regulation, and/or regulation of protein degradation. Special consideration will be given to candidates with experience with *Streptomyces* physiology. This person will be expected to work closely with members of the *Streptomyces* gene expression group within the Department of Molecular Genetics. Our postdoctoral appointments are normally for a two year duration.

Scientist, Microbial Physiology

Position is available immediately to study the influence of microbial physiology on the expression of foreign proteins in a variety of

microorganisms. Candidates for this position should have an MS in Microbiology or a related discipline. Candidates with a BS and 2-3 years of pertinent experience will also be considered. Applicants should have experience with the production of recombinant proteins in *E. coli*, *S. cerevisiae*, and/or *Streptomyces* sp. Experience with state-of-the-art fermentation equipment is desirable but not required.

Associate Scientist, Chemical Engineering

Position is available immediately to develop and evaluate new process control strategies to optimize microbial fermentations producing recombinant products in a state-of-the-art computer-controlled pilot plant. Candidates should have a BS in Chemical Engineering with coursework in process control, microbiology and biochemistry. Candidates with a BS in microbiology will also be considered.

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. Please forward your C.V. and names of three references to: Robert F. Obst, Manager, Personnel Relations, R0112, Smith Kline & French Laboratories, Research and Development Division, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

SK&F
A SmithKline Beckman Company

POSITIONS OPEN

CENTER FOR MARINE MAMMAL STUDIES, SCHOOL FOR FIELD STUDIES

FIELD DIRECTOR: Baja, Mexico. Permanent position. Responsible for administering an undergraduate year-round program in marine mammal science, and directing a conservation-oriented field research program. Additional duties include site management, local liaison, and supervision of four faculty and 50 students per year. Requires demonstrated administrative and management ability; Mexican field experience, Ph.D. or equivalent, college teaching and research experience in marine biology with emphasis on fisheries management or marine mammals. Nine and one-half months at site, 1.5 months in Beverly, MA. Salary: \$26,000 U.S., plus travel/living expenses. Résumés to: **Dean, SFS, 376 Hale Street, Beverly, MA, 01915. Equal Opportunity Employer.**

HEAD DEPARTMENT OF CHEMISTRY

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

HEALTH SCIENTIST—Hampshire College seeks a scientist working in a discipline related to human health, such as nutritional biochemistry, epidemiology, or immunology. The new appointee will contribute to the curriculum in areas of women's health and/or Third World health issues as well as to more traditional curriculum areas in biology. Hampshire College offers a stimulating and supportive environment for interdisciplinary teaching and research and has active Third World and Women in Science programs. Faculty at Hampshire are expected to develop science courses and seminars and to supervise and evaluate a variety of student projects. *Hampshire College is an Equal Opportunity Employer and has embarked upon a vigorous Affirmative Action program. Minorities and women are especially encouraged to apply.* Appointment will be at assistant professor level. The committee will begin reviewing applications on 15 January 1988. Send curriculum vitae, the names of three references, and a letter of application to: **Laurie DuShion, Health Search Committee, School of Natural Science, Hampshire College, Amherst, MA 01002.**

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

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

POSITIONS OPEN

LUDWIG INSTITUTE FOR CANCER RESEARCH STOCKHOLM BRANCH GROUP LEADER IN MOLECULAR AND CELL BIOLOGY

A new Branch of the Ludwig Institute for Cancer Research has recently been established in conjunction with the Karolinska Institute and the Karolinska Hospital. The research program is focused on (i) the understanding of membrane protein trafficking in eukaryotic cells (sorting, targeting, retention in intra-cellular compartments), (ii) the interaction of class I MHC antigens with viral proteins, and (iii) the role of oncogene and growth factor activation, as well as recessive oncogenes in human brain tumors and renal cell carcinoma.

Applications are invited for a position as group leader from scientists with interests in the biosynthesis and mechanisms of action of membrane proteins (e.g., growth factor receptors, cell adhesion molecules, multi-drug resistance) or secretory proteins (e.g., growth factors) involved in oncogenesis. A strong background in molecular and cell biology is necessary. The applicant should have a Ph.D. degree and at least 2 years of postdoctoral training.

The position is available from 1 January 1988. The appointment is for an initial 3 years, with the possibility of extensions. Travel and removal expenses will be covered by the Institute. Salaries for a postdoctoral fellow, a Ph.D. student and a technician are available immediately. Sufficient funds for running expenses and travel to scientific conferences are also supplied.

Applications, which should include curriculum vitae with a list of publications, a summary of past work and future research plans, and the names of at least three referees, should be forwarded, before 15 December 1987, to: **Dr. R. F. Pettersson, Director, Ludwig Institute for Cancer Research, Stockholm Branch, Box 60202, S-104 01 Stockholm, Sweden. Telephone no. (Int.+468) 310701. Telefax (Int.+468) 332812.**

ICHTHYOLOGIST

The Academy of Natural Sciences of Philadelphia seeks an outstanding ichthyologist for the career-track position, Assistant/Associate Curator of Ichthyology. Qualifications: (i) Ph.D. in biology or related discipline; (ii) demonstrated research skills in systematics or evolutionary biology; (iii) ability to establish and carry out independent research program; (iv) willingness to share curatorial responsibilities for collections in ichthyology; and (v) ability to attract grant support for research program. Candidates doing research on the evolution or systematics of fishes will be of particular interest. This position includes opportunities for adjunct appointment and graduate students at the University of Pennsylvania.

Send curriculum vitae, letter summarizing research interests, reprints, and names and addresses of three references no later than 15 January 1988 to: **Ichthyology Search Committee, c/o J. Wheeler, The Academy of Natural Sciences of Philadelphia, 19th and the Parkway, Philadelphia, PA 19103.**

The Academy of Natural Sciences is an Equal Opportunity/Affirmative Action Employer.

IMMUNOLOGIST—Assistant professor, research associate and associate director of clinical immunology laboratory. Expected to bring or develop funded independent research program and participate in current human immunology projects. (Transplantation, leukemia and HIV). Send curriculum vitae or inquire to: **Harold Lischner, M.D., Section of Immunology and Rheumatology, Department of Pediatrics, Temple University School of Medicine at St. Christopher's Hospital for Children, 2600 North Lawrence Street, Philadelphia, PA 19133. An Equal Opportunity/Affirmative Action Employer.**

Tulane University, Delta Primate Research Center, is seeking an **IMMUNOLOGIST** in the Department of Parasitology. Applicants should have experience in parasitic diseases, and will be expected to participate in malaria and filariasis research as well as to develop independent programs. Send curriculum vitae and the names of three references by 1 January 1988 to: **Chairman, Immunologist Search Committee, Delta Primate Center, Covington, LA 70433. Tulane is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

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

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

Ohio University is an Affirmative Action/Equal Opportunity Employer.



IMMUNOLOGY LABORATORY DIRECTOR

Ph.D. IMMUNOLOGIST wanted to be the supervising scientist for the research laboratories of a well-funded biotech startup in the Boston area. Must have experience with in vitro immunization and activation of lymphocytes, as well as laboratory management. This position will report directly to the Scientific Director of the company, and will be a unique mixture of basic and clinically oriented research, requiring both scientific and administrative skills. Opportunity available for academic collaborations and scientific publications. Please send curriculum vitae with salary requirement and date of availability to: **Alcor Therapeutics, Inc., 1256 Soldiers Field Road, Brighton, MA 02135.**

INSTRUCTOR

Design and conduct experiments on the neuroendocrine regulation of lactating animals and their offspring. Experimental protocols include in vivo (stereotaxic and other surgical manipulations) and in vitro (superfusion and static cultures of pituitary cells) methods. Experience in immunological (enzyme immunoassay, affinity chromatography, radioimmunoassay) and in morphological methods (immunohistochemistry, neuroanatomical tract-tracing methods) is essential. Must have an M.D. and 2 years of postdoctoral training in the field of neuroendocrinology of lactation and regulation of growth hormone secretion. Forty hours per week; \$22,000 per year. Apply at: **Tennessee Job Service, 1295 Poplar Avenue, Memphis, TN 38104. Attention: Mr. Jack Hilzheim.**

INSTRUCTOR

Design and conduct experiments on in vitro and in vivo actions of bacterial cell wall products. Experimental protocols include isolation of glycopeptides from bacteria and from mammalian tissues and testing for biological activity. Experience in modern chromatographic techniques, and in animal research is essential. Experience in neuroendocrinology is desirable. Must have a Ph.D. in chemistry, biochemistry, or microbiology, and postdoctoral training in neurophysiology. Forty hours per week; \$22,000 per year. Apply at: **Tennessee Job Service, 1295 Poplar Avenue, Memphis, TN 38104. Attention: Mr. Jack Hilzheim.**

TENURE-TRACK FACULTY POSITION IN MARINE SCIENCE

The University of Alaska-Fairbanks, Institute of Marine Science, is seeking applicants for a tenure-track faculty position in the general area of fisheries oceanography. The appointment will be with the Institute of Marine Science in the School of Fisheries and Ocean Sciences and will involve research and graduate-level instruction and supervision. The Institute of Marine Science has a dynamic group of 22 faculty from various disciplines and about 35 graduate students. It is involved in a variety of research activities in arctic and sub-arctic seas. Many of these are multi-disciplinary and we wish to fill the position with a person committed to collaborative work with ongoing and future programs.

We are seeking a person who will develop a program addressing the effects of oceanographic processes and variability on ecosystems and fish and shellfish stocks. Some specific areas of interest may include high latitude research, larval fish or shellfish ecology as related to oceanography, numerical modeling, fish and shellfish population dynamics, and biometry. Experience in the application of remote sensing to fisheries oceanography is desirable. However, outstanding applicants in other related areas will also be considered.

Candidates must possess a Ph.D. in an appropriate discipline. We expect to fill this position at the Assistant Professor level, although a more senior appointment may be possible depending on the applicant's credentials.

Applications must be received by January 15, 1988.

Applicants should send a statement of interest, a curriculum vitae and the names and addresses of three references to:

**Dr. Howard M. Feder, Chairman
Search Committee
c/o Director's Office
Institute of Marine Science
University of Alaska-Fairbanks
Fairbanks, AK 99775-1080**

The University of Alaska is an EO/AA Employer and Educational Institution. Your application for employment with the U of A may be subject to public disclosure if you are selected as a finalist.



NATIONAL UNIVERSITY OF SINGAPORE DEPARTMENT OF BOTANY

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

Candidates should have a Ph.D. degree and be able to teach in one or more of the following areas in plant sciences: molecular biology, biotechnology, recombinant DNA-technology, gene transfer systems, molecular genetics, biochemistry, developmental biology/morphogenesis and tropical ecology.

Gross annual emoluments range as follows:

Lecturer	SS\$27,660-57,350
Senior Lecturer	SS\$51,950-91,070
Associate Professor	SS\$79,780-109,880
(US\$1.00 = S\$2.10 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, subsidised 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 eight faculties in the National University of Singapore with a current student enrolment of some 14,000. All departments are 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 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, N.Y. 10017, U.S.A.
Tel: (212) 751-0331**

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



**Agricultural
Research
Service**

**United States
Department of
Agriculture**

BIOCHEMICAL ENGINEER

The Engineering Science Research Unit, Eastern Regional Research Center, ARS, U.S. Department of Agriculture, is expanding its biochemical engineering research program. The Eastern Regional Research Center is located in Wyndmoor, PA, a northwestern suburb of Philadelphia. Applications for a lead scientist position are invited.

This position requires a working knowledge of biochemical and traditional chemical engineering and the preferred applicant will have demonstrated the ability to originate and lead a research project to a successful conclusion. Current emphasis is on development of immobilized enzyme reactor for fat and oil hydrolysis.

Applicants must be U.S. citizens. The position will be rated GM-13/14/15, with a salary range from the high 30's to low 60's, commensurate with experience. A Ph.D. is preferred. For information regarding the program or position, contact Mr. James C. Craig, Jr., 215/233-6589. For information on application procedures and forms, contact Mr. Lee Triplett at (301) 344-1863 by December 14, 1987. Applications should be marked 7EC0287 and must be received by December 28, 1987.

USDA IS AN EQUAL OPPORTUNITY EMPLOYER
WOMEN AND MINORITIES ARE URGED TO APPLY.

LIPOSOME TECHNOLOGY RESEARCH AND DEVELOPMENT

The Parenterals Division of Baxter Healthcare Corporation has opportunities within its divisional headquarters research and development group for individuals wishing to pursue studies on the encapsulation of macromolecules in liposomes for use in therapeutic intravenous solutions. These unique opportunities involve contact with a broad spectrum of chemistry, life science, and engineering professionals working as an interdisciplinary team to produce next generation therapeutic products.

We seek individuals with experience in the preparation of liposome formulations and the analysis of lipids. Experience in process development and heme protein biochemistry is also desirable. The requirements for specific positions include:

Sr. Research Associate: Ph.D. in Biophysics, Biochemistry, or Chemistry with 1-3 years post-doctoral experience.

Research Assistant: B.S. Chemistry, Biochemistry, or Bioengineering.

Baxter Healthcare Corporation is a multi-billion dollar leader in the healthcare industry with research facilities throughout the world. The Parenterals Division Research and Development group consists of over 300 men and women who will soon move to a new state-of-the-art laboratory located on our Round Lake, Illinois technical campus, located 50 miles northwest of Chicago, presenting a choice of urban, suburban, or rural lifestyles. Baxter provides a competitive salary and comprehensive benefits program. For confidential consideration, please forward your resume to: **Marta Lindahl, Director of Staffing, Parenterals Division, Baxter Healthcare Corporation, P.O. Box 490, Round Lake, IL 60073.** Equal Opportunity Employer.

Baxter

POSITIONS OPEN

INVERTEBRATE ZOOLOGIST—The University of Richmond invites applications for a tenure-track position in biology at the assistant professor level. The primary teaching responsibilities will involve invertebrate zoology and general zoology. Candidates must also demonstrate competence in electron microscopy. Preference will be given to those who will develop an active research program in invertebrate zoology involving both undergraduate and M.S. level graduate students. Candidates must have the Ph.D. degree and postdoctoral experience is desirable. Submit résumé, undergraduate and graduate transcripts, a statement of research plan, and three letters of reference to: **Dr. F. B. Leftwich, Department of Biology, University of Richmond, Richmond, VA 23173.** Consideration of applications will begin on 15 January 1988. *The University of Richmond is an Equal Opportunity Employer and encourages applications from qualified women and minority candidates.*

MAGNETIC RESONANCE FACULTY (TWO)

The Kettering Scott Magnetic Resonance (MR) Laboratory of the Wright State University School of Medicine and the Charles F. Kettering Medical Center seek two MR faculty members. One is to develop a research program centered on physical and/or engineering aspects of instrumentation or technique development. Candidates must have evidence of productivity in a field of magnetic resonance research such as but not limited to pulse sequence development, signal/image processing, software development, or probe/coil development. The second position is for an MR spectroscopist. Candidates must have evidence of research productivity with in vivo or in vitro NMR.

A Ph.D. in an appropriate field is required and postdoctoral experience is preferred. The successful applicants for both positions will be expected to establish a vigorous independent research program in MR imaging or spectroscopy, collaborate with MR users on the design and interpretation of MR experiments, and help to oversee a whole body spectrometer. The successful candidates will be appointed to the faculty of the Wright State University School of Medicine in a suitable department or program. Rank and salary are negotiable.

The Kettering Scott Magnetic Resonance Laboratory currently has a whole-animal spectrometer-image with a 40 cm bore 2.3T magnet, a 9 cm bore 360 MHz spectrometer equipped for solution and solid state spectroscopy, a human-body imager with a 2.5T magnet, computer facilities, and electronic/machine shop facilities. The Laboratory is in the process of purchasing a 2T whole body spectrometer.

Applicants should send curriculum vitae as well as the names and addresses of three references to: **Dr. Robert A. Weisman, Chair, Magnetic Resonance Laboratory Search Committee, 234 Biological Sciences Building, Wright State University School of Medicine, P.O. Box 927, Dayton, OH 45401.** Applications received by 1 March 1988 will be considered; if the position is not filled therefrom, applications will be considered until the positions are filled. *Wright State University is an Affirmative Action/Equal Opportunity Employer.*

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

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

Mail applications to:

**Janie Carr, USDA-ARS-PD
Personnel Operations Branch
Northern Section
Building 419, BARC-East
Beltsville, MD 20705
An Equal Opportunity Employer**

POSITIONS OPEN

MARINE LAB DIRECTOR, CATALINA MARINE SCIENCE CENTER. University of Southern California through the Institute for Marine and Coastal Studies. Staff position available February 1988. Requirements: Ph.D. in marine sciences; at least 2 years of administrative experience; record of scientific research and teaching. Responsibilities include setting the operating and administrative policy for the Center; program development; promotion of the lab's teaching and research programs and facilities; fund raising and grant writing; conducting active research. Please send résumé and names of three references by 15 January 1988, to: **Director, Institute for Marine and Coastal Studies, University of Southern California, University Park, Los Angeles, CA 90089-1231.**

MICROBIOLOGISTS/BIOCHEMISTS

Celgene Corporation, a leader in the application of biotechnology and chemical technology to the chemical industry is currently seeking experienced, innovative microbiologists and biochemists in the following areas:

- Metabolism and Aromatic Compounds
- Hydrocarbon Transformations
- Enzymology
- Bioremediation

Candidates should have a Ph.D. in the relevant discipline, and have outstanding credentials in order to be considered for these high potential positions. Celgene is a well-funded public company with established facilities. Celgene is committed to becoming the premier industrial biotechnology company.

Candidates should immediately send detailed résumés to:

**Dept SB-B
Celgene Corporation
7 Powder Horn Drive
Warren, NJ 07060**



MOLECULAR BIOLOGIST YALE SCHOOL OF MEDICINE

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

MOLECULAR AND DEVELOPMENTAL NEUROBIOLOGIST TENURE-TRACK ASSOCIATE PROFESSOR

The Division of Hematology-Oncology of Childrens Hospital of Los Angeles has a commitment to fundamental research aimed at an understanding of the etiology, biology and treatment of pediatric neoplasms. A chair had been endowed to underwrite the research of an individual involved in areas related to the molecular biology of human neural tumors. Ample space is available in a newly constructed laboratory facility adjacent to individuals involved in cellular and molecular biological studies on various aspects of pediatric cancers. Applications are invited from individuals who have an established research program with a history of extramural funding. Applicants should send curriculum vitae, and a description of career goals and research objectives, and names of three references to: **Richard Moran, Ph.D., Chairman, Search Committee, Division of Hematology-Oncology, Childrens Hospital of Los Angeles/University of Southern California, 4650 Sunset Boulevard, Los Angeles, CA 90027.**

The University of Southern California is an Equal Opportunity Employer.

POSITIONS OPEN

NEUROBIOLOGIST, Ph.D., is sought in the Department of Biology of Swarthmore College for a tenure-track position, preferably at the assistant professor level, starting September 1988. Applicants are expected to maintain an active research program and have a strong commitment to undergraduate education. The successful candidate will be expected to participate in an introductory course in biology, teach an intermediate level course in neurophysiology, and teach an advanced course in his or her area of expertise. *Minorities and women are encouraged to apply.*

Interested persons should submit (i) curriculum vitae, (ii) copies of undergraduate and graduate transcripts, (iii) a statement of current teaching and research interests and (iv) three letters of recommendation to: **Dr. Mark Jacobs, Acting Chair, Department of Biology, Swarthmore College, Swarthmore, PA 19081** by 8 January 1988. *Equal Opportunity Employer.*

NEUROBIOLOGIST SENIOR POSITION (ASSOCIATE OR PROFESSOR LEVEL)

The rapidly growing Division of Neurobiology in the Department of Anatomy and Cell Biology seeks an established investigator working at the cellular/molecular level on issues of neural development and/or function. Applicants using contemporary approaches are particularly encouraged to apply. Excellent resources are available in the department including tissue culture, EM, video microscopy and image analysis.

Significant set-up funds and space are committed to this search. The successful candidate will play a major role in the future growth of research and graduate training. Contribution to team-taught medical neuroscience course is expected.

Please send curriculum vitae, statement of research plans, curriculum vitae and names of four individuals who would write recommendation letters to: **M. T. Shipley, Ph.D., Chairman, Neurobiology Search Committee, University of Cincinnati, Anatomy and Cell Biology Department, 231 Bethesda Avenue, M.L. #521, Cincinnati, OH 45267-0521.**

NEUROSCIENCE/PSYCHOBIOLOGY

Tenure-track **ASSISTANT OR ASSOCIATE PROFESSORSHIP** in psychology, contributing to an interdisciplinary program of research and teaching with biology. Requirements: assistant level: 2 to 3 years of postdoctoral experience, associate level: an established research program. Candidates also must be committed to both graduate and undergraduate teaching. Position is for 9 months per year and starts 1 August 1988; application deadline is 1 January 1988. Send curriculum vitae, reprint/preprints and three letters of reference to: **Dr. M. R. Harter, Department of Psychology, University of North Carolina at Greensboro, Greensboro, NC 27412-5001.** *Affirmative Action/Equal Opportunity Employer.*

PHARMACOLOGIST

Faculty/research position for appropriate Ph.D., Pharm.D. Qualifications include experience in pharmacokinetics in a cancer research setting and research accomplishments. Faculty rank and salary commensurate with experience. Send curriculum vitae and references to: **Laurence H. Baker, D.O., Director, Division of Hematology and Oncology, Wayne State University School of Medicine, P.O. Box 02188, Detroit, MI 48201.**

POSTDOCTORAL POSITION: Directed mutagenesis study of enzyme active site residues. Applications are invited for a postdoctoral position currently available in a team studying the role of enzyme active site residues in binding of substrates and inhibitors, in the catalytic mechanism and in equilibria between conformers. Techniques used to characterize mutant enzyme include stopped-flow fluorimetry and spectrophotometry and FT-NMR. Applicants should have a strong background in enzymology and experience with the relevant techniques is an advantage. Salary: \$20,000 to \$24,000, depending on experience. Position renewable up to 3 years. Send curriculum vitae and three letters of recommendation to: **Dr. Raymond L. Blakley, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

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

POSITIONS OPEN

POSTDOCTORAL POSITIONS available for the in vivo and in vitro study of the cerebral microcirculation. Research projects will explore the role and interaction of neurotransmitters, arachidonic acid metabolism and free radicals in the control of blood flow in the normal and injured brain microcirculation. Salary based on qualifications. Send curriculum vitae and names of three references to: **Dr. Earl Ellis, Department of Pharmacology and Toxicology, Medical College of Virginia, Virginia Commonwealth University (VCU), Richmond, VA 23298-0001. VCU is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.**

POSITIONS OPEN

The Australian National University. Applications are invited for appointment to the position of **POSTDOCTORAL FELLOW**, Population Genetics Group, Research School of Biological Sciences. The Population Genetics Group studies genetic differentiation and evolution of insect populations. A postdoctoral fellowship will be available from mid-1988 to investigate embryogenesis and rates of development in the grasshopper species complex, *Caledia captiva*. The aim of the project is to assess the role of chromosome structure in modifying early developmental processes as an adaptation to environmental heterogeneity. Applicants should have a Ph.D. in insect ecology or physiology, and an interest in the evolution of life history strategies and population genetics. Further details may be obtained from: **Dr. D. D. Shaw, Population Genetics Group, (6162) 49.4539**. Closing date: 15 March 1988. Reference: BS.5.11.1. Salary: Postdoctoral Fellow Grade 1 (fixed point); \$A24,535 to \$A28,029 per annum; appointment: normally 2 years, possibility of extension to 3 years. Applications should be submitted in duplicate to: **The Registrar, The Australian National University, GPO Box 4, Canberra ACT 2601, Australia**, quoting reference number and including curriculum vitae, list of publications, and names of at least three referees. The University reserves the right not to make an appointment or to appoint by invitation at any time. Further information is available from the Registrar.

The University is an Equal Opportunity Employer.

POSTDOCTORAL FELLOW OR RESEARCH ASSISTANT PROFESSOR to join multidisciplinary team investigating new approaches to brain tumor therapy. Individual should have laboratory (animal) background in pharmacology, tumor biology, brain research, or related field. Position available immediately. Send curriculum vitae, list of publications, salary requirements, and names and addresses of three references to: **Dr. R. A. Morantz, Brain Tumor Institute, Research Medical Center, Kansas City, MO 66132.**

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

POSTDOCTORAL POSITION

Postdoctoral position available immediately in molecular genetics. This position involves the study of gene expression in yeast. Experience in the characterization and manipulation of cloned genes is desirable. Apply with curriculum vitae, research interests and three letters of reference to: **Dr. Julius Marmur, Department of Biochemistry, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, NY 10461.**

POSTDOCTORAL POSITION available immediately at University of California San Francisco (UCSF) for protein chemist/enzymologist with some experience in molecular biology techniques to study structure, properties and function of oxidoreductases and membrane-bound enzymes. \$26,400 to \$28,900 to start. Résumé, two recent reprints, and names of three references to: **Dr. W. S. McIntire, Molecular Biology Division, UCSF, VAMC 151-S, 4150 Clement Street, San Francisco, CA 94121.**

POSTDOCTORAL POSITION: Mechanisms of cytotoxicity of a nucleoside anticancer agent. This project is concerned with the effect of the analog or nucleotides formed from it on various enzymes involved in nucleic acid synthesis, including ribonucleotide reductase, DNA polymerase and DNA ligase. We will also examine whether incorporation of the analog into DNA affects transcription or processing of pre-mRNA. Applicants should have a strong background in enzymology, preferably with experience related to the projected work. Starting salary \$22,000 to \$26,000 depending on experience. The position is open immediately and is renewable after 1 year for up to 3 years. Send curriculum vitae and three letters of recommendation to: **Dr. Raymond L. Blakley, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101. Equal Opportunity Employer.**

LONZA

We are a medium-sized, international chemical company. Our VALAIS WORKS in Visp is one of the most important production sites of the concern (approx. 2600 employees). Our Research department for fine chemicals and organic intermediates is looking for a young

University Graduate



We expect you to possess a degree (Ph.D.) in the field of organic chemistry. You should enjoy working in an interdisciplinary team and should be prepared and able to work independently on a project up to its decision point.

The field of work includes:

- the search for and study of synthetic routes to new products
- the expansion of our Building Block programme
- the development of economic and environmentally acceptable processes

To achieve these aims you will have modern, well-equipped laboratories available. You will be supported by a scientific-technical computer centre, a high-performance analytical department and a excellent literature service.

After your thorough inauguration in this job there are further possibilities of developing your career within the concern.

We look forward to receiving details from you or hearing directly from you (please telephone Mr. Fux).

LONZA AG, Walliser Werke
Personnel Department
CH-3930 Visp, Tel. Switzerland/028/48 53 49

POSITIONS OPEN

POSTDOCTORAL POSITIONS available immediately in the Neurochemical Pharmacology Research Unit (NPRU) and/or Neuropsychopharmacology Laboratory (NPPL) for studies on the neurochemical pharmacology of central serotonin autoreceptors (NPRU), the neurophysiology (NPPL) and neuropharmacology (NPRU/NPPL) of central dopaminergic systems, and the mechanisms of action of cocaine and other drugs of abuse on monoaminergic neurotransmission (NPRU/NPPL). Experience with in vivo and in vitro biochemical (HPLC) or neurophysiological techniques (single-cell recording, iontophoresis) is desirable, but not required. Send curriculum vitae, representative publications, and names of three references to: **Dr. Matthew P. Galloway (NPRU) or Dr. Francis J. White (NPPL)**, Wayne State University, Department of Psychiatry, Lafayette Clinic, 951 East Lafayette, Detroit, MI 48207.

TWO POSTDOCTORAL POSITIONS: one to study the inorganic reactions of Zn, Cu, Cd-metallothionein related to its functions in cells; the other to examine the structure and chemistry of *Euglena gracilis* Cd- and Cu-binding peptides and Zn and Fe metabolism in this organism. Send résumé and three letters of reference to: **David H. Petering**, Department of Chemistry, University of Wisconsin-Milwaukee (UWM), P.O. Box 413, Milwaukee, WI 53201. UWM is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE position located in Clemson, South Carolina (temporary: not to exceed 2 years), available to study habitat selection of southeastern fox squirrels and southern flying squirrels. Applicants should have a recent Ph.D. in wildlife biology, ecology, or mammalogy. Must have a strong quantitative background to assess squirrel abundance in relation to habitat and ability to develop a comprehensive program of field studies and interact with land managers. Starting salary is \$27,172 per annum. *Forest Service is an Equal Opportunity Employer. Women and minorities are encouraged to apply.* Send letter of application, complete résumé, and names of three references to: **Dr. Michael R. Lennart**, USDA Forest Service, Southeastern Forest Experiment Station, Department of Forestry, Clemson University, Clemson, SC 29634-1003.

POSITIONS OPEN

POSTDOCTORAL POSITION for 2 years in Alcohol Research available immediately. Studies include the hormonal regulation of ethanol metabolism in primary hepatocyte culture and the effects of ethanol on glutathione metabolism both in vivo and in hepatocyte culture. U.S. citizen or permanent resident. Send letter of application and curriculum vitae to: **Esteban Mezey, M.D., Professor of Medicine, The Johns Hopkins Hospital, 600 North Wolfe Street, Baltimore, MD 21205.**

POSTDOCTORAL POSITIONS UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE

Two postdoctoral positions are available to study the molecular biology and genetics of drug resistance in mammalian cells. The principal areas for investigation include (i) structure-function analyses of variant forms of dihydrofolate reductases displaying altered sensitivities to antifolates and (ii) molecular mechanisms responsible for the establishment and maintenance of the multidrug-resistance phenotype. Candidates with prior experience in recombinant DNA technology, protein chemistry and/or cell biology will be considered. Send curriculum vitae and names of three references to:

Dr. Peter W. Melera
Department of Biological Chemistry
University of Maryland School of Medicine
660 West Redwood Street
Baltimore, MD 21201

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available to study signal transduction and structure-function relations in the T cell receptor. The applicant should be a recent Ph.D. with a strong background in membrane protein biochemistry or molecular biology and experience in mammalian cell culture. A joint appointment will be held in an appropriate department of Harvard Medical School. Send curriculum vitae, summary of research experience, and the names of three references to: **Dr. Anjana Rao**, Dana-Farber Cancer Institute, 44 Binney Street, D1030C, Boston, MA 02115. *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL RESEARCH FELLOW. To join group engaged in studies of protein hormones and growth factors in biological fluids and breast cancer risk. Research experience with HPLC and gel electrophoresis of proteins is essential for this position. Initial funding is for 3 years, but with opportunity to achieve a permanent position. Research institute located in the northern suburbs of New York City offering an excellent research environment and sophisticated instrumentation. Send résumé to: **Dr. David P. Rose**, American Health Foundation, 1 Dana Road, Valhalla, NY 10595. *An Equal Opportunity Employer M/F/H/V.*

POSTDOCTORAL/RESEARCH FELLOW. Position available immediately in cell biology/cancer pharmacology. Qualifications include a Ph.D. or M.D. with strong background in immunocytochemistry, monoclonal antibody production and/or protein purification. Experience with tissue culture techniques desirable. The candidate will work with a (multidisciplinary) research team that is investigating the receptor-mediated transport of folates, the regulation of cellular folate homeostasis and the mechanism of the action of anti-folates. Please send résumé and the names of three references to: **Dr. Barton Kamen**, Department of Pediatrics, UTSMCD, 5323 Harry Hines Boulevard, Dallas, TX 75235-9063. *UTSMCD is an Equal Opportunity University.*

POSTDOCTORAL RESEARCH IN MOLECULAR NEUROBIOLOGY—Position available immediately for study of the regulation of neuronal gene expression. Cloned cDNA and genomic sequences encoding the neuron-specific protein synapsin are available as tools. Projects involve both medically oriented (aging, dementia, retinitis pigmentosa) and molecular (tissue-specific, developmentally regulated gene expression) research carried out on this X-linked gene. Background in molecular biology/mammalian cell culture/genetics (or *Drosophila* molecular biology/genetics) an advantage. Submit curriculum vitae and names, addresses, and telephone numbers of three references: **Dr. Louis DeGennaro**, University of Massachusetts Medical Center (UMMC), Department of Neurology, 55 Lake Avenue North, Worcester, MA 01655. *UMMC is an Equal Opportunity/Affirmative Action Employer.*

Molecular Biology Associates

seeking two Research Associates at the B.S. or M.S. degree levels with relevant molecular biology research experience, including demonstrated skills in experimental design, computerized analyses and interpretation of data. These positions offer an exciting scientific environment and opportunities to interact with the scientific community within and outside Upjohn.

Mammalian Cell Molecular Biologist: Experience in basic recombinant DNA techniques and mammalian cell culture is required; a background in virology studies is highly desirable; this position will involve research on regulation of viral gene expression.

DNA Sequencing: Experience in basic recombinant DNA techniques and DNA sequencing required; knowledge and experience with both chemical and enzymatic sequencing are desirable; position will be part of a laboratory to develop and apply methods for rapid determination of large DNA sequences. Analysis of data by computers will be an essential part of this position.

Kalamazoo is located in Southwestern Michigan midway between Chicago and Detroit and offers varied cultural events, cosmopolitan shopping and entertainment, lakes and woodlands minutes away, abundant year-round sports and recreation. Upjohn offers advancement opportunities, a highly competitive salary commensurate with experience, comprehensive benefits and relocation assistance. For confidential consideration, please call from outside of Michigan toll free 1/800/253-8600, ext. 3-6767, (inside Michigan call collect 616/323-6767) to request an employment application be sent to you immediately. Please refer to advertisement number 22104-A when responding. We are an Equal Opportunity Employer M/F.

Upjohn

Our commitment to scientific excellence continues...

TENURE-TRACK FACULTY POSITION IN MARINE SCIENCE

The University of Alaska-Fairbanks, Institute of Marine Science, is seeking applicants for a tenure-track faculty position in the general area of pelagic primary production/nutrient dynamics. The appointment will be with the Institute of Marine Science in the School of Fisheries and Ocean Sciences and will involve research and graduate-level instruction and supervision. The Institute of Marine Science has a dynamic group of 22 faculty from various disciplines and about 35 graduate students. It is involved in a variety of research activities in arctic and sub-arctic seas. Many of these are multi-disciplinary and we wish to fill the position with a person committed to collaborative work with ongoing and future programs.

We seek a person who will bring modern experimental and process-oriented approaches to problems in any of the following or related areas:

Phytoplankton physiology, adaptation to low light levels, role of trace organics as photosynthetic cofactors, and modern approaches to measuring primary production.

The role of planktonic organisms in pelagic carbon fixation and remineralization using recombinant DNA techniques, immunochemical probes and biochemical rate measurements.

Candidates must possess a Ph.D. in an appropriate discipline. We expect to fill this position at the Assistant Professor level, although a more senior appointment may be possible depending on the applicant's credentials.

Applications must be received by January 15, 1988.

Applicants should send a statement of interest, a curriculum vitae and the names and addresses of three references to:

Dr. William Reeburgh, Chairman
Search Committee
c/o Director's Office
Institute of Marine Science
University of Alaska-Fairbanks
Fairbanks, AK 99775-1080

The University of Alaska is an EO/AA Employer and Educational Institution. Your application for employment with the U of A may be subject to public disclosure if you are selected as a finalist.

THE SCIENCE RECRUITMENT "FOUR DAY CLOSE" NOW YOU CAN SEE YOUR AD IN SCIENCE FOUR DAYS AFTER SUBMISSION

Scientific Recruiters can now advertise positions almost as soon as the need arises. Instead of reserving space a month or more in advance, you can now place your ad four days before the magazine mailing date. *SCIENCE* is mailed on the cover date.

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For further information, telephone Ed. Keller, Recruitment Advertising Manager, or Donna Rivera, Production Manager at *SCIENCE* : 212-730-1050, or write to: *SCIENCE*, 1515 Broadway, NY, NY 10036.

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POSTDOCTORAL POSITIONS

Postdoctoral research fellowship positions are available in the Molecular Biology, Cell Biology, Biochemistry and Immunology Laboratories at the Jerome H. Holland Laboratory for the Biomedical Sciences. The positions are supported by individual investigator awards and by institutional funds. Salaries and benefits are competitive. The investigators and their research interests are:

Wilson H. Burgess: Structure and function of polypeptide growth factors and receptors

William Drohan: Molecular biology of coagulation and fibrinolytic polypeptides

Joan T. Harmon: Molecular and cellular biology of megakaryopoiesis

Leon W. Hoyer: Immunochemical properties of Factor VIII inhibitors

Kenneth Ingham: Physical biochemistry of heparin-binding proteins

Graham Jamieson: Structure and function of platelet receptors

Gene Liau: Molecular and cellular biology of the extracellular matrix and atherogenesis

Thomas Maciag: Molecular and cellular biology of angiogenesis and aging

James Perdue: Molecular and cellular biology of growth factors in development

Dorthea Scandella: Regulation of gene expression

Dudley Strickland: Cellular biochemistry of proteases and inhibitors

Andrea Tenner: Biochemistry of complement receptors

Jeffrey Winkles: Gene expression and the control of vascular cell proliferation

The American Red Cross recently established the Jerome H. Holland Laboratory as part of its commitment to a strong investigator-initiated basic research program. The American Red Cross promotes an open, collegial environment which facilitates scientific interactions. Send curriculum vitae, names of three references and an indication of the investigator and area of research interest to **Dr. Howard Sandberg, American Red Cross, Research and Development Administration, 15601 Crabbs Branch Way, Rockville, Maryland 20855 U.S.A.**

An Equal Opportunity/Affirmative Action Employer M/F/H



American Red Cross

BIOMEDICAL RESEARCH + DEVELOPMENT

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE: to study cellular regulation of collagen degradation in the mammalian cornea. Experience in cell biology, and biochemistry or molecular biology preferred. Position available January 1988. Starting salary: \$24,000. Send curriculum vitae and names of three references to: **Dr. Barbara Johnson-Wint, Department of Biological Sciences, Northern Illinois University, DeKalb, IL 60115.** *Equal Opportunity/Affirmative Action Employer.*

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

UNIVERSITY OF UTAH SCHOOL OF MEDICINE DEPARTMENT OF RADIOLOGY

A POSTDOCTORAL RESEARCH SCIENTIST position is available July 1988 for studies on the enzymology of mammalian chromatin in heterogeneous murine carcinoma cells. The applicant should have a background in nucleic acid biochemistry or molecular biology. The studies will involve cell biological, biophysical and enzymological techniques as well as molecular biological approach on the mechanisms of poly(ADP-ribose) synthetase, and topoisomerase I and II modifications of chromatin structure and functions in various physiological (growth) states of cancer cells in tissue culture. Stipend negotiable. U.S. citizenship or permanent visa required. Application, including curriculum vitae and the names and addresses of three references should be sent to: **Lyle A. Dethlefsen, D.V.M., Ph.D., Department of Radiology, University of Utah Health Sciences Center, Salt Lake City, UT 84132.** *Equal Opportunity Employer.* Applications beyond July 1988 accepted if qualified candidate not identified.

POSITIONS OPEN

TWO POSTDOCTORAL/RESEARCH ASSOCIATE positions available immediately to study: (i) lipid metabolism in experimental obesity, and (ii) molecular biology of the pyruvate dehydrogenase complex as it relates to gene expression and inborn errors (prior experience in molecular biology essential). Recent Ph.D. preferred. Send curriculum vitae to: **Dr. M. S. Patel, Department of Biochemistry, Case Western Reserve University School of Medicine, Cleveland, OH 44106.**

PROFESSOR OF BIOLOGICAL CHEMISTRY—Harvard Medical School is searching for a Professor of Biological Chemistry who will serve as Chief of the Laboratory of Molecular Genetics at the Dana-Farber Cancer Institute. The successful candidate is expected to be an established investigator in the field of general genetic recombination mechanisms of bacteria and/or eukaryotes. The ideal candidate would incorporate contemporary techniques in genetics, molecular biology, and enzymology into a broadly based research program. Interested individuals should send a letter and curriculum vitae to: **Dr. Charles Stiles, Division of Cell Growth and Regulation, Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115.** *Harvard Medical School and the Dana-Farber Cancer Institute are Equal Opportunity/Affirmative Action Employers.*

HARVARD MEDICAL SCHOOL MASSACHUSETTS GENERAL HOSPITAL PROFESSOR OF MOLECULAR BIOPHYSICS

To direct basic and applied research in photobiology and laser medicine within the Wellman Laboratories of Photomedicine, a large multidisciplinary research group. Proven skills and demonstrated creativity in biophysics, optical radiation biology, laser biology, and either chemical physics, physical chemistry, or photochemistry. Interested candidates, please send curriculum vitae to: **John A. Parrish, M.D., Professor and Chairman, Department of Dermatology, Harvard Medical School, Massachusetts General Hospital, 32 Fruit Street, Boston, MA 02114.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORATE—UROLOGICAL BIOMECHANICS: Ph.D. in physiology to aid in functional modeling of genitourinary-biomechanical systems, including soft tissue and neuromuscular interactions. Rich academic and industrial sources for interaction. **D. A. Frohrib, Ph.D., Mechanical Engineering Department, University of Minnesota, Minneapolis, MN 55455.** Telephone: 612-625-9058.

PROFESSOR AND CHAIR DEPARTMENT OF MICROBIOLOGY

Arizona State University is searching for candidates for the chair of the newly reorganized Department of Microbiology. The candidate should have an exceptional record of research in microbiology or immunology, a commitment to excellence in the education of graduate and undergraduate students, and leadership and administrative abilities. Review of applications will begin 15 January 1988, and continue until a suitable applicant is selected. Send curriculum vitae, recent reprints, and names, addresses and telephone numbers of three referees to: **Professor J. M. Schmidt, Microbiology Chair Search Committee, Department of Microbiology, Arizona State University, Tempe, AZ 85287-1601.** *Arizona State University is a committed Equal Opportunity/Affirmative Action Employer.*

PROFESSOR OF PATHOLOGY—The Harvard Medical School and the Dana-Farber Cancer Institute invite applications for Professor of Pathology and Head of the Laboratory of Molecular Immunology at the Dana-Farber. The applicant should be an outstanding scientist with an international reputation in research on cell activation and cellular interaction processes in defense mechanisms, with an emphasis on the basic biochemical and molecular biological aspects. The successful candidate will be expected to lead a strong research program and to supervise junior faculty, graduate students and medical students. Applicants should submit curriculum vitae and a statement of research interest to: **Dr. Martin Dorf, Department of Pathology, Harvard Medical School, 25 Shattuck Street, D2-563, Boston, MA 02115.** *Harvard Medical School and the Dana-Farber Cancer Institute are Equal Opportunity/Affirmative Action Employers.*

Cellular Immunologists

The Department of Immunology of Smith Kline & French Laboratories, located in suburban Philadelphia, Pennsylvania, is seeking outstanding scientists to expand its current research programs in cellular immunology and immunoregulation. The individuals will be involved in a multidisciplinary research effort focused on T cell activation, ligand-receptor interactions and cloned vaccine development.

Successful candidates are required to have:

- Ph.D. in immunology with 2-6 years postdoctoral experience in cellular or molecular immunology.
- expertise in molecular and cellular interactions of T cell activation and immunoregulation.
- a strong publication record
- excellent oral and written communication skills
- ability to interact with a multidisciplinary research team.

We offer excellent compensation and benefits as well as an attractive relocation policy. For confidential consideration send your C.V. and names of three references to **Robert F. Obst, Manager, Personnel Relations, R0111, Smith Kline & French Laboratories, Research and Development Division, P. O. Box 1539, King of Prussia, PA 19406-0939.** We are an Equal Opportunity Employer, M/F/H/V.

SK&F
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RHÔNE-POULENC AG COMPANY

INSECT PHYSIOLOGIST INSECT BIOCHEMISTS

Due to an expansion of our Biochemistry / Research area, Rhône-Poulenc Ag Company, a North Carolina based subsidiary of Rhône-Poulenc, one of the four largest agrochemical companies in the world, has openings for an experienced Insect Physiologist and two Biochemists.

The successful candidate for the Physiology position will be expected to motivate and lead a small unit devoted to insect electro-physiology. The candidate should hold a Ph.D. in Physiology, Entomology or Insect Toxicology and have several years of relevant research experience. Extensive practical electro-physiological research experience may be considered in lieu of the Ph.D. requirement.

For the Insect Biochemist positions, the successful candidates will join a small group involved in the study of the site of action and mode of action of novel insecticides. For the senior position, the candidate will hold a Ph.D. in Biochemistry and have some research experience in insect biochemistry related to insecticides. For the other position, an M.S. and research experience or a recently qualified Ph.D. in Insect Biochemistry or Insect Toxicology will be considered.

Please send resume and salary requirements to:

Human Resources Administrator

RHÔNE-POULENC AG COMPANY
PO Box 12014
Research Triangle Park, NC 27709

An Equal Opportunity/Affirmative Action Employer

Biochemist

Procter & Gamble has an immediate entry-level opening for a Ph.D. or postdoctoral biochemist at our Miami Valley Laboratories in Cincinnati, Ohio. This person would be part of an interdisciplinary team applying fundamental scientific principles to the development of technology to support our growing skin care business.

The research program involves in vitro and whole animal evaluation of cutaneous responses and their control. Experience in the regulation/control of metabolic and enzymatic processes, proliferation/differentiation/keratinization or general skin biochemistry is desired. Knowledge of tissue culture, protein isolation/characterization, histology and percutaneous penetration techniques and photobiologic effects would be additional assets.

Procter & Gamble is a world leader in the research, development, and manufacture of consumer products. We offer a competitive salary, a fringe benefit package in the top 5% of U.S. firms, and excellent opportunity for personal and career growth.

Applicants must be U.S. citizens or permanent residents and should send resume and publication list to:

Dr. T.J. Logan
Biochemist (Skin) Position
THE PROCTER & GAMBLE COMPANY
P.O. Box 398707
Cincinnati, Ohio 45239-8707

Procter & Gamble is an EQUAL OPPORTUNITY employer.



SENIOR RESEARCH INVESTIGATOR

Clinical Pharmacology and Drug Metabolism

Du Pont Critical Care, a division of E.I. du Pont de Nemours and Company, specializing in critical care cardiovascular drugs, has an opening for a Senior Research Investigator in the clinical pharmacology and drug metabolism section.

Qualified candidates will have a Ph.D. in Pharmaceutics or Pharmacology with expertise in clinical pharmacokinetics and kinetic models. Industrial experience in conducting clinical pharmacokinetic studies and analysis of clinical pharmacokinetics data are highly desirable.

Along with conducting and managing clinical pharmacokinetic and clinical pharmacology studies and data analysis, the individual will prepare medical study protocols and summaries, and interact with the Medical Department by providing pharmacokinetic input in study design and analysis.

Our R&D facility is located in the far north suburbs of Chicago. The work environment is progressive and fast-paced and the compensation package is excellent. For confidential consideration, forward resume, including salary history to:

Employment Manager
Du Pont Critical Care
1600 Waukegan Road • Waukegan, IL 60085
Equal Opportunity Employer

CONFERENCE ON THE DEVELOPMENT OF VACCINES AGAINST HIV INFECTION AND AIDS

Institute of Medicine
December 14-15, 1987

Responses of Chimpanzees to HIV Immunization
 Patricia Fultz

Virus-Receptor Interactions and Structure
 Larry Lasky

The Basis for Protective Efficacy of Vaccines
 Maurice Hilleman

Design and Conduct of Clinical Trials
 Gerald Quinnan

Ethical and Liability Issues
 David Karzon

NIH Perspective
 Anthony Fauci

For registration and further information contact:

Holly Dawkins
Institute of Medicine
2101 Constitution Avenue, NW
Washington, DC 20418
202/334-3912

Attendance is limited, no registration fee is required.

SENIOR RESEARCH SCIENTIST

MOLECULAR BIOLOGY,
 IMMUNOCHEMISTRY, BIOCHEMISTRY

With Ph.D. or equivalent and at least three years' experience in a related field, will help guide the development of nucleic acid probe diagnostic methods and products. Successful candidate will demonstrate excellence in independent research, communication, and scientific management of nucleic acid probe and recombinant DNA technologies. Applicants experienced with infectious agents, monoclonal antibody production, or non-radioactive detection methods will be given preference.

MOLECULAR BIOLOGISTS/ MICROBIOLOGISTS

With all levels of experience are needed to accelerate development of nucleic acid probe diagnostic methods and products. Successful candidates will join a team at **Promega** which will identify nucleic acid probes to distinguish specific pathogens from other organisms and will develop non-radioactive methods for detection of these pathogens with the goal of producing kits for use in clinical laboratories. Applicants should have a strong background in molecular biology of nucleic acids or in handling of clinically important microorganisms.

Promega offers excellent salary and benefits. Send curriculum vitae and references to: Personnel Director, Product Operations, Promega Corporation, 2800 S. Fish Hatchery Rd., Madison, WI 53711. Equal Opportunity Employer.



DIRECTOR

CANCER RESEARCH CENTER OF HAWAII

The Cancer Research Center is a research institute of the University of Hawaii housed in modern facilities adjacent to the downtown medical centers in Honolulu. The Director is responsible for providing executive leadership for the research and administration of the CRCH, which currently consists of five programs: 1) Basic Science, 2) Clinical Science, 3) Epidemiology, 4) Data Resources, and 5) Cancer Control; the present total budget of these operations is nearly \$4 million per year including about \$900,000 from State of Hawaii general funds. One of the major challenges facing the new Director will be to develop an expanded clinical research program through the planned Cancer Research Consortium of Hawaii, an association of the Cancer Research Center of Hawaii and several major hospitals in Honolulu. To facilitate this development an additional \$1 million/year of funds from State and private sources and several senior tenure-track positions will be made available. In addition, commitments have been made to establish new clinical research laboratories at the Cancer Center and new research oncology wards and specialized treatment centers at the hospitals. The Director will also be expected to maintain and develop productive relationships within the University of Hawaii, the State of Hawaii, federal and local agencies involved in cancer research, the medical community and the lay public.

Candidates should have: an M.D. degree; a record of demonstrated leadership and administrative ability; national and international recognition in clinical cancer research; and a record of successful grant procurement and research achievement. Salary is competitive. The Directorship is non-tenurable, but the selectee may qualify for immediate tenure as a faculty member at the University of Hawaii.

To apply send current resume and the names, addresses and telephone numbers of at least five (5) references to: **Dr. Tom Humphreys, Chair, Director's Search Committee, Cancer Research Center of Hawaii, 1236 Lauhala St., Honolulu, HI 96813.**

Closing date is January 1, 1988, or later if position has not been filled.

The University of Hawaii is an Equal Opportunity/Affirmative Action Employer

Molecular Genetics

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

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

The Department of Molecular Genetics is seeking outstanding scientists with Bachelor's or Master's degrees. The preferred candidate will have experience with recombinant DNA and tissue culture techniques.

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. Publication of research results is encouraged and supported. For confidential review, please forward your C.V. and names of three references to: Robert F. Obst, Manager, Personnel Relations, R0115, Smith Kline & French Laboratories, Research and Development Division, P. O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

SK&F

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RESEARCH SCIENTIST EXPLORATORY RESEARCH

Amgen is a dynamic and growing organization that is a recognized leader in recombinant DNA technology. Our leadership in developing erythropoietin and other products for human therapeutics, human diagnostics, animal health care and specialty chemicals has placed us firmly in the forefront of the industry. We currently have an opportunity for a Research Scientist to contribute to our Exploratory Research Group.

Qualified candidates will have a Ph.D. and at least 2-4 years of postdoctoral experience in the molecular and cellular biology of any of the following disciplines: neurobiology, lipid metabolism, bone formation, soft tissue regeneration, hematology, endocrinology or immunomodulators. Experience in cDNA cloning and gene expression as it relates to these disciplines is highly desirable.

Amgen offers a stimulating and challenging research environment as well as an attractive location (about an hour northwest of Los Angeles). **Amgen** also offer a competitive compensation and benefits package. Qualified applicants should send a resume, in confidence, to:

Recruitment, Dept. #112B
AMGEN
1900 Oak Terrace Lane
Thousand Oaks
CA 91320



Equal Opportunity Employer

MOLECULAR BIOLOGISTS PH.D. LEVEL

The Molecular Biology Research Group at Centocor has openings for creative and strongly motivated senior-level scientists to join ongoing research on immunoglobulin gene expression.

Qualifications should include:

- Ph.D. in Molecular Biology or related fields
- Two or more years of postdoctoral experience in Molecular Biology
- Background in eucaryotic gene expression and regulation
- Experience with immunoglobulin gene expression desirable but not essential
- A proven record of significant scientific achievement including original publications.

Responsibilities:

- Bench level studies using state-of-the-art molecular biology techniques to manipulate and express immunoglobulin genes and create novel antibody molecules.
- Interact with other molecular biologists, immunologists and clinical investigators involved in research on the use of monoclonal antibodies for therapy and diagnostics.

Centocor is a rapidly growing international biopharmaceutical company with over 300 employees based in suburban Philadelphia. We offer excellent compensation and benefits. Qualified candidates should send curriculum vitae in confidence to: **Dr. John Ghrayeb, Director, Molecular Biology, Centocor, Inc., CPE23, 244 Great Valley Parkway, Malvern, Pennsylvania 19355.** Equal Opportunity Employer.

CENTOCOR

THE SCIENCE RECRUITMENT "FOUR DAY CLOSE" NOW YOU CAN SEE YOUR AD IN SCIENCE FOUR DAYS AFTER SUBMISSION

Scientific Recruiters can now advertise positions almost as soon as the need arises. Instead of reserving space a month or more in advance, you can now place your ad four days before the magazine mailing date. SCIENCE is mailed on the cover date.

Film (right-reading, emulsion face down) or full camera ready art and insertion order must reach: SCIENCE, Short Close Desk, 1515 Broadway, New York, NY 10036 by NOON Mondays (except for legal holidays when material must reach New York by Noon Fridays). Because space is limited, the four-day close page will be reserved on a first-come, first-served basis, at a 15% premium. 1/4 and 1/2 page ads only.

Now you don't have to wait to find the researchers you need immediately, nor must you advertise in a Sunday paper that pans a lot of sand, but not much gold. Scientific employers know that SCIENCE ads fill the job better. Now they fill it faster too.

You can call it "INSTANT RECRUITMENT."

For further information, telephone Ed. Keller, Recruitment Advertising Manager, or Donna Rivera, Production Manager at SCIENCE : 212-730-1050, or write to: SCIENCE, 1515 Broadway, NY, NY 10036.

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ASSOCIATE DEAN

For Research, Basic Science and Graduate Studies

The School of Medicine at Texas Tech University Health Sciences Center invites applications for the position of Associate Dean for Research, Basic Sciences and Graduate Studies. The position will be available September 1, 1988.

Responsibilities: The successful candidate will be expected to 1) develop and coordinate components of the School of Medicine that contribute to the research mission of the entire school which includes four regional campuses, 2) monitor space allocations and assist and advise the basic science chairpersons in the development of budgets, 3) serve as the chief administrative officer of the TTUHSC School of Medicine graduate programs and 4) serve as the Dean's liaison to Schools of Nursing and Allied Health.

Qualifications: Candidates for this position should have a Ph.D. in a biomedical field or an M.D. with clinical research experience; teaching experience including supervision of graduate students and/or fellows; been principal investigator on NIH/NSF or major foundation grants; had experience in the grant review process and research contract negotiations, with prior service on NIH/NSF study sections highly desirable. Administrative skills should include experience as a medical school department chairperson or director of a major biomedical research program; and background in research development, budget preparation, and faculty space and equipment allocations.

Application Process: Nominations and applications should include a curriculum vitae and names, addresses and phone numbers of three references. Screening of applications will begin February 1, 1988, and will continue until the position is filled. Please submit application materials to:

Reid L. Norman, Ph.D.
Cell Biology and Anatomy
School of Medicine
Texas Tech University
Health Sciences Center
Lubbock, TX 79430

Texas Tech University Health Sciences Center is an Equal Opportunity, Affirmative Action Employer

IBI POSITION OPENINGS

Technical Training Specialist — We are looking for an individual to organize and teach our Sequencing Workshops. The ideal candidate will have a Ph.D. and at least one year of laboratory experience with dideoxy sequencing. If you are ready to leave the research laboratory and enjoy teaching, please contact us for more information on this unique opportunity.

Protein Biochemistry Product Manager — This individual will play a key role in developing products from idea stage to final release for protein biochemistry research laboratories. The successful candidate will have working knowledge of protein purification and analysis techniques and a strong interest in Product Development and Marketing. Sales or Technical Service experience is preferred.

Technical Service Representative — This critical Customer Service position provides technical assistance on the use of IBI products and systems. A thorough knowledge of standard molecular biology techniques, familiarity with protein biochemistry and excellent interpersonal skills are required.

Interested candidates should submit resumes to:

Attention: Position Title (see above)
IBI
P.O. Box 9558
New Haven, CT 06535



POSITIONS OPEN

PSYCHOLOGY, EXPERIMENTAL AND COGNITIVE. Two positions at the ASSISTANT PROFESSOR level, fall 1988. (i) Experimental with an animal learning orientation. Courses in introductory, learning, motivation, and laboratory methods; supervision of senior theses. (ii) Cognitive with a cognitive science orientation. Courses in introductory, cognitive science, language, and research methods; supervision of senior theses.

Applicants are expected to be committed to excellence in teaching and to active research programs open to Carleton's able undergraduates. Send curriculum vitae, three letters of recommendation, manuscripts or reprints, and a cover letter discussing teaching and research plans in the context of a liberal arts college to: **Dr. Neil Lutsky, Department of Psychology, Carleton College, Northfield, MN 55057-4025. An Equal Opportunity/Affirmative Action Employer.** Deadline: 20 December 1987.

RESEARCH APPOINTMENT IN ENVIRONMENTAL POLICY AND BIOTECHNOLOGY

The National Audubon Society seeks an academic scientist familiar with biotechnology issues to assist Audubon in developing a rational environmental strategy for coping with this new technology. Audubon is particularly concerned with the land-use implications of new agricultural products that may be developed, especially as they relate to the maintenance of biological diversity and the conservation of natural lands. The appointee will work with Audubon scientists in New York City and Washington to lay the groundwork for our 550,000 members to play a responsible role in the public policy debates that are bound to surface in the next decade. The exact nature of the position is negotiable. From Audubon's perspective, the ideal candidate would be an academic scientist who plans to spend a sabbatical year in the near future researching issues related to environmental regulation of biotechnology. Supplementary salary and expenses would be provided. Hopefully, the collaboration could be continued for a second year on a consulting basis.

As an alternative to a faculty member on sabbatical, Audubon will consider appointing a visiting scientist with postdoctoral experience in a field related to biotechnology regulation. Such an appointment would be for 2 years. Salary would be in the \$30,000 to \$40,000 range. Exploratory letters should be sent to: **Dr. J. P. Myers, Sr. Vice President for Science, National Audubon Society, 950 Third Avenue, New York, NY 10022.**

RESEARCH ASSOCIATE AND/OR RESEARCH ASSISTANT PROFESSOR POSITIONS (Department of Neurosurgery, Albert Einstein College of Medicine/Montefiore Medical Center). To study the expression of cell-surface glycosphingolipids and glycoproteins in normal and neoplastic neuronal cell types and their modulation by polypeptide growth factors. Minimum requirement: Ph.D. in biochemistry, cell/molecular biology, or equivalent. Send curriculum vitae and three references to: **Dr. J. R. Moskal and/or Dr. R. S. Morrison, Department of Neurosurgery, Albert Einstein College of Medicine/Montefiore Medical Center, 111 East 210 Street, Bronx, NY 10467. An Equal Opportunity/Affirmative Action Institution.**

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

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

POSITIONS OPEN

RESEARCH ASSOCIATE/RESEARCH ASSISTANT—FISHERIES ACOUSTICS. Fisheries Acoustics: Individuals with quantitative skills and research interests in the application of underwater acoustics to the study of freshwater and marine fish populations are invited to apply for either a research associate (Ph.D.) or research assistant (B.S. or M.S.) position. Experience with underwater acoustics preferred, but we will also train qualified applicants. Positions are for a period of 1 to 2 years, with renewal dependent on external funding. Salary commensurate with qualifications. Submit curriculum vitae and three references by 8 December, 1987 to: **Dr. Stephen Brandt, Chesapeake Biological Laboratory, University of Maryland, Solomons, MD 20688-0038.**

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

RESEARCH SCIENTIST/PHYSICAL CHEMISTRY. Requirements: Ph.D. in physical chemistry, 3 years of postdoctoral research experience, 4 years of research experience must be in solution thermodynamics with extensive training in Fortran programming (may be gained during and/or after Ph.D. studies); publications in refereed journals. Duties: Improve scale prediction program, measure solubility of scale-forming sulfates at high temperatures and pressures, measure densities for modal volumes and supervise a graduate student. Salary of \$14,000 per year for a basic work week of 40 hours. Send résumé to: **Job #090931, Oklahoma State Employment Service Office, 717 South Service Road, Moore, OK 73160.**

RESEARCH SCIENTIST/POSTDOCTORAL FELLOW: The Long Island Jewish Medical Center/Harvard Medical School Research Consortium has opening for postdoctoral scientist with interests in tumor biology and signal transduction in human cancer. We are particularly interested in scientists with skills in protein purification, enzymology, HPLC and immunology. Position available 1 January 1988. Send curriculum vitae to: **LIJMC/Harvard Medical School Research Consortium, Department of Radiation Oncology, Long Island Jewish Medical Center, New Hyde Park, NY 11042. An Equal Opportunity Employer.**

EARLY ANNOUNCEMENT

Forestry Science Laboratory located in Delaware, Ohio is anticipating two permanent full-time SCIENTIST positions opening in spring/summer 1988. The work is aimed at elucidating the role of growth regulators in insect development. One position is for a biochemist with experience in protein purification/characterization and enzyme kinetics studies. The second position is to work on cDNA cloning, sequencing and expression of regulatory genes. Salary ranges \$27,172 to \$50,346. Commensurate with experience. U.S. citizen required. Reply to: **Dr. M. Chang, Forestry Sciences Laboratory, 359 Main Road, Delaware, OH 43015. Telephone: 614-369-4476 or 4471.**

Available immediately. A career development opportunity for a postdoctoral SCIENTIST capable of developing independent research projects in the area of pathogenesis of inflammation. Preference given to applicants with interest in the role of prostaglandins in inflammation or chemotaxis of inflammatory cells, chemiluminescence and superoxide generation. Send curriculum vitae and references to: **Dr. S. Murthy, Krancer Center for Inflammatory Bowel Disease Research, MS 426, Hahnemann University, Broad and Vine, Philadelphia, PA 19102.**

SOMATOSENSORY ELECTROPHYSIOLOGY

The Institute for Sensory Research, Syracuse University, is seeking a somatosensory electrophysiologist for a tenure-track position available spring 1988. Candidates should have a demonstrated ability to conduct independent research, a working knowledge of somatosensory literature in physiology and psychophysics, and mathematical skills sufficient for receptor-system modeling. Must have ability to advise graduate students. Rank and salary commensurate with qualifications. Send curriculum vitae, statement of research interests, representative reprints, and names of three references by 15 January 1988 to: **Dr. Steven C. Chamberlain, Institute for Sensory Research, Syracuse University, Syracuse, NY 13244. Syracuse University is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN



CIIT, an innovative leader in toxicology research, seeks to fill the following position in its Research Triangle Park, North Carolina facility:

SCIENTIST Cellular and Molecular Toxicology Department

Position open for a scientist interested in the mechanisms of chemically-induced cellular injury. Possible areas are the role of oncogenes in carcinogenesis, chemical alteration of receptors controlling cell growth and differentiation, effects on cells controlling immune functions, effects on membrane structure, and the mechanisms of promotion of initiated cells. The individual should have a M.D., D.V.M., or Ph.D. plus postdoctoral training with at least five additional years of research experience.

Reply in confidence to:

**Employment Office
Chemical Industry Institute of Toxicology
P.O. Box 12137
Research Triangle Park, NC 27709**

An Equal Opportunity/Affirmative Action Employer

STUDY DIRECTOR TOXICOLOGY

Responsibilities:

- Prepare protocols, study schedules, interim, and final reports
- Extensive client contact
- Provide technical support to other areas of the organization

Requirements:

- Ph.D. in toxicology or related science
- Five years of applicable experience
- Excellent written and verbal skills

**Hazleton
Laboratories America, Inc.
Personnel Department
P.O. Box 7545
Madison, WI 53707**

All information will remain confidential.
Equal Opportunity Employer.

SYSTEMATIST

The Academy of Natural Sciences of Philadelphia invites applications for a career-track position, Assistant Curator of Systematics and Evolutionary Biology. We seek an outstanding individual interested in one or more of the following fields: invertebrate systematics (neontology and paleontology), vertebrate paleontology, diatom systematics, entomology, botany.

Qualifications: (i) Ph.D. in biology or related discipline; (ii) demonstrated research skills in systematics and evolutionary biology; (iii) ability to attract grant support for research program; and (iv) commitment to curation of the Academy's valuable research collections relevant to applicant's area of expertise. Potential exists for adjunct appointment and graduate students at the University of Pennsylvania.

Send curriculum vitae, letter summarizing research interests, reprints, and names and addresses of three references no later than 15 January 1988 to: **Systematist Search Committee, c/o J. Wheeler, The Academy of Natural Sciences of Philadelphia, 19th and the Parkway, Philadelphia, PA 19103.**

The Academy of Natural Sciences is an Equal Opportunity/Affirmative Action Employer.

**DEPARTMENT OF GEOLOGY
AND GEOPHYSICS
UNIVERSITY OF CALIFORNIA, BERKELEY
BERKELEY, CA 94720**

We plan to build upon our initiative in isotope geochemistry and crustal evolution by hiring at least two **TENURE-TRACK FACULTY** this year at the junior or senior level. Applicants with outstanding records in research and teaching in the fields of geochemistry, petrology and geodynamics are encouraged to apply. Subject to final budgetary approval, the positions will become effective 1 July 1988.

Applications, including the names of at least three references, should be sent to: **The Chairman of the Department by 1 March 1988.**

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

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, 1989 through December 31, 1989 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 1988 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 5 months.

Requests for applications should reach the National Academy of Sciences not later than February 15, 1988. Applications must be postmarked by February 29, 1988. Address application requests to:

National Academy of Sciences
Office of International Affairs
Soviet and East European Affairs (6F-166)
2101 Constitution Avenue, NW
Washington, D.C. 20418
Telephone (202) 334-2644

MEDICAL SCHOOL DEAN

Robert Wood Johnson Medical School (previously Rutgers Medical School) of the University of Medicine and Dentistry of New Jersey invites applications and nominations for the position of Dean.

Candidates should have demonstrated administrative skills and the ability to lead the continued development of basic science and clinical science departments in a complex environment.

Applications and nominations should be accompanied by a current resume and two letters of support. Please address all correspondence to: **James W. Mackenzie, M.D., Chairman, Dean's Search Committee, Department of Surgery, UMDNJ-Robert Wood Johnson Medical School, 1 Robert Wood Johnson Place, CN19, (S), New Brunswick, NJ 08903-0019.**

Equal Opportunity/Affirmative Action
Employer M/F/H/V.



ENVIRONMENTAL AND EVOLUTIONARY BIOLOGY

The Department of Biology at the University of Southwestern Louisiana (USL) invites applications to further build its doctoral program in Environmental and Evolutionary Biology. USL has the second largest full-time enrollment in the state. The USL administration is committed to excellence in undergraduate and graduate education and research. The present search is part of an effort to continue development of nationally-recognized programs in biology. The biology faculty consists of 22 full-time and 6 adjuncts. Research interests range from molecular to ecosystem studies. The Biology Department is housed in a newly renovated building with an excellent array of research instrumentation. The Department maintains close ties with specialized campus research centers such as the Electron Microscopy Center (currently undergoing a \$1.4 million upgrade), the Primate Research Center, the Center for Crustacean Research and the developing Center for Research Instrumentation. Exceptionally strong computing facilities are available on campus. USL is affiliated with the Louisiana Universities Marine Consortium (LUMCON) which operates a marine laboratory and research vessels on the Gulf Coast about 100 miles southeast of Lafayette.

FACULTY

New faculty will be expected to participate in undergraduate and graduate instruction, direct graduate student research and develop a recognized research program competitive for extramural funding. To fill these tenure-track positions, we are seeking exceptionally qualified individuals with research and teaching interests in the following areas:

Developmental Biology—research emphasis in structure or process in ontogeny. Primary teaching responsibilities include histology and developmental biology.

Cell Biology and Ultrastructure—research emphasis in form/function relationships. Teaching responsibilities include graduate level course in ultrastructure.

Environmental Biology—research emphasis in population dynamics, wildlife toxicology, nutrition or remote sensing. Primary teaching responsibilities include 2 semester course in wildlife management.

Mycology—research program centered on molecular genetics of fungi. Primary teaching responsibility includes medical bacteriology. Appointment will be in the Department of Microbiology with adjunct appointment in the Department of Biology.

To apply, send curriculum vitae, concise statement of research goals and names of at least three individuals from whom letters of recommendation may be obtained. Review of applications will begin on January 15, 1988 and continue until positions are filled. Direct application to: **Faculty Development Search Committee, Department of Biology, The University of Southwestern Louisiana, Lafayette, LA 70504-2451. AA/EOE.**

DOCTORAL FELLOWSHIPS

The Department of Biology will offer up to five fellowships to incoming doctoral students in the Environmental and Evolutionary Biology program. Each fellowship has a duration of three years (entering with M.S.) or four years (entering with B.S.). The stipend is \$12,000 to \$15,000 per year plus tuition and fee waiver. In addition, some fellows will receive \$500 per year for travel to scientific meetings and \$2,000 for research expenses beyond those funds provided by the Department, the Graduate Student Organization and faculty grants. Fellows devote full time to research and course work. For further information and application forms, contact: **Graduate Coordinator, Department of Biology, The University of Southwestern Louisiana, Lafayette, LA 70504-2451 or phone (318) 231-6755 before January 1, 1988.**

POSTDOCTORAL ASSOCIATES

Two grant-funded positions available in morphology and ultrastructure. Initial stipend of \$20,000 per annum. To collaborate on research projects in plant cell cytoskeleton, plant cell motility systems, crustacean development or insect neurosecretory systems. Review of applications will begin 15 January, 1988 and continue until positions are filled. Contact: **Dr. R.C. Brown, Department of Biology, University of Southwestern Louisiana, Lafayette, LA 70504-2451.**

DOCTORAL RESEARCH ASSISTANTSHIPS

Three positions are available to support areas specified for PDA's above. The stipend is \$8,500 per academic year. For further information and application forms, contact: **Graduate Coordinator, Department of Biology, The University of Southwestern Louisiana, Lafayette, LA 70504-2451 or phone (318) 231-6755 before January 1, 1988.**

EM TECHNICIAN

Competence in ultrathin sectioning, SEM, TEM and darkroom photography. Available immediately, B.S. required. Starting salary \$18,500 per year. Contact: **Dr. R.C. Brown, Department of Biology, University of Southwestern Louisiana, Lafayette, LA 70504-2451.**

POSITIONS OPEN

The Department of Veterinary Biomedical Sciences, University of Missouri—Columbia, is accepting applications for three **TENURE-TRACK FACULTY POSITIONS** at the assistant-associate professor level in (1) pharmacology, (2) biochemistry—cell biology, and (3) histology—cell morphology. Qualifications include D.V.M. and/or Ph.D. or equivalent; exceptional potential to develop a strong biomedical research program; and capability to direct/teach professional or graduate level courses in veterinary pharmacology, biochemistry, or microanatomy. Interests of this rapidly growing multidisciplinary department include circulation research encompassing molecular to systems analyses; endocrinology—reproductive biology; toxicology and neurosciences. Preference for one position will be placed on expanding the circulation research focus relative to membrane-molecular approaches to muscle biology, but outstanding applicants in other areas are encouraged to apply. One position is jointly sponsored by the Dalton Research Center and will involve cardiovascular control mechanisms, at the molecular, cellular, or systemic level.

Applications should include curriculum vitae, names of four references, and a letter stating professional goals. Send correspondence to: **H. Richard Adams, Department of Veterinary Biomedical Sciences, College of Veterinary Medicine, University of Missouri—Columbia, Columbia, MO 65211.**

TOXICOLOGIST—The U.S. Environmental Protection Agency (EPA) Region II is seeking experienced applicants for a vacancy in its Edison, New Jersey laboratory to provide expert and specialized technical assistance and interpretation of data regarding the effects of hazardous and toxic substances on human health and the environment. Position requires a strong mix of technical expertise in evaluating the effects of toxic materials and the ability to communicate with the public both orally and in writing. Minimum requirements are: 3 years of specialized experience and at least 30 semester hours in chemistry, biochemistry, or physiology, and 12 semester hours in toxicology. Salary range: \$38,727 to \$50,346. Submit Application for Federal Employment, SF-171 and copy of college transcript to: U.S. EPA, Human Resources Branch, Code 11-87, 26 Federal Plaza, Room 937-C, New York, NY 10278. For information call: 212-264-0016. EPA is an EOE.

VERTEBRATE BIOLOGIST. The Department of Biology seeks a Ph.D. with research emphasis on foraging patterns, growth, and reproduction, preferably in reptiles. Duties will include teaching an introductory biology course and courses in the area of specialty. Send curriculum vitae, and a statement of research interests by 31 December 1987 to: **Dr. Z. T. Halpin, Search Committee Chairperson, Department of Biology, University of Missouri—St. Louis, 8001 Natural Bridge Road, St. Louis, MO 63121-4499.** *Minority candidates are encouraged to apply.*

The University of Missouri is an EO/AAE.

AWARDS

GRADUATE STUDENT RESEARCH AWARDS, Ecology and Environmental Policy—The Science Division of the National Audubon Society invites applications for graduate student research support in **ECOLOGICAL AND ENVIRONMENTAL POLICY.** Candidates should be at an early stage in their doctoral program. Applications in two general areas are especially encouraged: (i) Field work on ecological processes with broad relevance to the management of National Audubon Society sanctuaries and other managed lands, e.g., on hydrological cycles, nutrient limitation, prescribed burning, or grazing impacts on natural communities (ii) Policy analyses of emerging national environmental issues, e.g., on the role of electric vehicles in moderating global climate changes, implications of biotechnology for land use, using the permit-review process as a conservation tool, or comparing the conservation implications of food irradiation vs. pesticides. The annual grants will be for up to \$6,000 and may be renewed for up to 3 years. Field research on Audubon sanctuaries may also be eligible for some on-site logistical support. Application instructions along with a more extensive (but not exclusive) list of potential research topics can be obtained by writing: **Graduate Student Research Awards, Science Division, National Audubon Society, 950 Third Avenue, New York, NY 10022.** Initial inquiries should be received by 1 January 1988. Completed applications are due by 1 March 1988.

TRAINING PROGRAMS

CAREERS IN BIOTECHNOLOGY. The Iowa Biotechnology Training Program (IBTP) offers \$15,000 predoctoral fellowships leading to the doctorate in immunology, molecular genetics, pathogenic microbiology, and microbial physiology. U.S. citizens write: **Dr. J. E. Butler, c/o IBTP, Department of Microbiology, University of Iowa, Iowa City, IA 52242.**

The University of New Mexico (UNM) School of Medicine and Los Alamos National Laboratory (LANL) have combined resources to create a multidisciplinary **Ph.D. PROGRAM.** Students have access to faculty and facilities of the Departments of Anatomy, Microbiology and Pathology at the UNM School of Medicine and the Life Sciences Division at LANL. The principal research areas are cell biology, immunology, neurobiology, biophysics, and biochemistry. Graduate stipends begin at \$8000 per annum. For information contact **Dr. J. M. Oliver, University of New Mexico School of Medicine, Cell Pathology, Surge Building, Albuquerque, NM 87131.**

GRADUATE TRAINING IN YEAST MOLECULAR BIOLOGY available in the Departments of Biochemistry, Microbiology and Cell Biology. University of Illinois at Champaign-Urbana. The **Yeast Group** consists of:

Vytas Bankaitis: molecular genetics of secretion and organelle function.

Christine Bulawa: regulation and biochemistry of cell wall biosynthesis.

Jim Kaput: intracellular protein transport and oxygen radical metabolism.

Jonathan Widom: structure and function of chromosomes.

Jo Ann Wise: roles of small nuclear and cytoplasmic ribonucleoprotein particles in splicing and protein transport.

Fellowships available for qualified applicants. For further details, contact: **Dr. V. Bankaitis, Department of Microbiology 217-333-5812, or Dr. Jo Ann Wise, Department of Biochemistry: 217-333-5854, University of Illinois at Champaign-Urbana, IL 61801.**

TRAINING PROGRAM IN MEMBRANE RECEPTORS AND TRANSPORT PROTEINS AT COLUMBIA UNIVERSITY

We invite applications for pre- and postdoctoral training in this NIH-sponsored, interdisciplinary program involving biochemical, biophysical, cell biological, and molecular biological approaches to membrane proteins and processes. The training faculty are **Qais Al-Awqati** (Medicine and Physiology), **Eric Holtzman** (Biological Sciences), **Kurt Drickamer**, **Barry Honig**, **Thomas Jessell**, **Arthur Karlin** (Biochemistry and Molecular Biophysics), and **Norman Latov** (Neurology). To qualify for NIH training-grant support, applicants need to be U.S. citizens or permanent residents. Applicants should send their curriculum vitae and three letters of reference to: **Professor Arthur Karlin, Department of Biochemistry and Molecular Biophysics, Columbia University, College of Physicians and Surgeons, 630 West 168th Street, New York, NY 10032.**

Columbia University takes Affirmative Action to Ensure Equal Opportunity.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP available in biomedical mass spectrometry. Research will involve the structural analysis by mass spectrometry of biologically important peptides, proteins, carbohydrates, glycopeptides, and glycolipids. Instrumentation available includes Kratos MS50, VG 30-250, and BioIon PDMS. Send curriculum vitae and two letters of recommendation to: **Professor Ian Jardine, Department of Pharmacology, Mayo Clinic, Rochester, MN 55905.** *An Equal Opportunity/Affirmative Action institution.*

POSTDOCTORAL FELLOWSHIP TUMOR METASTASIS—Focusing on the impact of fibrin structure on fibrinolysis and tumor cell metastasis. Experience in protein chemistry or cell culture techniques preferred. Comprehensive NIH-funded training grant with programs focused on the molecular and cellular biology of neoplasia. Send curriculum vitae and three references to: **Dr. Marcus Carr, Medical College of Virginia, Box 230, Richmond, VA 23298.**

FELLOWSHIPS

RESEARCH/MUSEUM FELLOWSHIPS AMERICAN MUSEUM OF NATURAL HISTORY

Research/Museum Fellowships are available to postdoctoral researchers and established scholars starting in summer and fall 1988. 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 1988. Request information booklet and application from:

**Office of Grants and Fellowships
American Museum of Natural History
Central Park West at 79th Street
New York, New York 10024**

POSTDOCTORAL FELLOWSHIPS

Postdoctoral research fellowships are available in the Division of Radiobiology, University of Utah School of Medicine to study radiation-induced sarcomas in animal model systems. A broad-based approach is being taken which includes immunobiology, cell biology and oncogene expression of tumors induced by radiation. Candidates should have a Ph.D. degree and a strong background in cell biology, molecular biology, or molecular immunology. The positions are available immediately at a range of \$20,000 to \$22,000 per annum. Submit curriculum vitae and names, addresses, and telephone numbers of three references to: **Raymond A. Daynes, Ph.D. or Scott C. Miller, Ph.D. at the Division of Radiobiology, Building 351, University of Utah School of Medicine, Salt Lake City, UT 84112.** Applications will be accepted through 15 December 1987. *The University of Utah is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL TRAINING IN LEUKOCYTE BIOLOGY

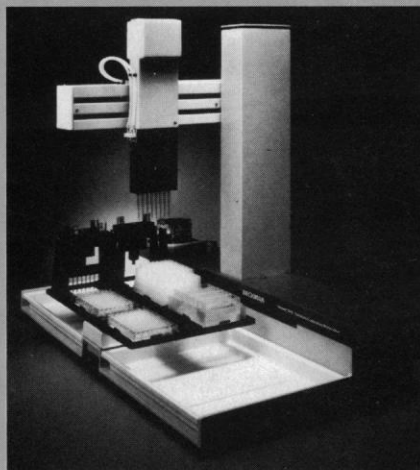
We have several **POSTDOCTORAL FELLOWSHIPS** available now for individuals interested in obtaining advanced training in leukocyte biology. Successful applicants will have the opportunity of joining and working with a diverse, multidisciplinary group of scientists interested in multiple aspects of macrophage physiology, including surface receptors, intracellular mechanisms of signal transduction cell-cell recognition, gene regulation, and tumor biology. Emphasis in training is placed on analysis of a problem of the fellow's choice in the above areas with tools in contemporary cellular and molecular biology. The five faculty members in the group include individuals skilled in leukocyte biology, protein chemistry, cell biology, or molecular biology. Previous training in biochemistry, protein chemistry, receptor biology, or cellular/molecular biology would be particularly suitable, though not essential. An attractive stipend, commensurate with experience, will be offered. Openings are available at several levels of training. Interested applicants should send curriculum vitae to:

**Dolph O. Adams
Laboratory of Cell and Molecular Biology
of Leukocytes
Department of Pathology
Duke University
Box 3712
Durham, NC 27710
*Equal Opportunity Employer***

VISUAL SCIENCE RESEARCH FELLOWSHIPS. Predoctoral and postdoctoral fellowships are available on a competitive basis in the Departments of Immunology/Microbiology, Anatomy/Cell Biology or Ophthalmology at Wayne State University, School of Medicine. General research areas include: anatomy, biochemistry, cell and molecular biology, clinical vision research, immunology, microbiology, neurobiology, virology and visual psychophysics. This multidisciplinary program is supported by an NIH training grant, and requires U.S. citizenship or permanent residency status. Postdoctoral applicants having completed an Ophthalmology residency program may qualify for additional supplementation and are encouraged to apply. Program information can be obtained by writing: **Dr. Paul C. Montgomery, Department of Immunology and Microbiology, Wayne State University Medical School, 540 East Canfield Avenue, Detroit, MI 48201.** *An Equal Opportunity/Affirmative Action Employer.*

BECKMAN SYMPOSIUM

Automation in Your Lab: ELISAs, DNA Sequencing and More!



The Biomek™ 1000 Workstation

Beckman Instruments is pleased to announce a symposium on the use of the Biomek™ 1000 Automated Laboratory Workstation for increased laboratory efficiency

and productivity in ELISA and DNA sequencing applications. This symposium will provide you with opportunities to talk to experts in these fields.

To extend the opportunity to the greatest number of interested researchers, the symposium will be repeated in six locations across the U.S.A.

Topics to be covered include:

- Automation of the dideoxy reaction steps in DNA sequencing.
- Development of automated ELISA test for antibody detection by direct antigen binding and competitive antibody assay.

Each session will last from 10:00 A.M. until 1:00 P.M., and lunch will be served.

A Biomek Users' Meeting will follow, to provide a forum for the exchange of applications information. The users' meeting will include a demonstration of the new ImmunoFit™ EIA/RIA Data Analysis Software, an advanced curve-fitting analysis package designed for immunological data reduction with an easy-to-use

graphics interface. The meeting will also include an in-depth explanation of the marks function and additional advanced programming theory. You are encouraged to bring your own research data and actively participate with your questions.

Schedule

Palo Alto, California	Hyatt Richeys	Monday, December 7, 1987
Indianapolis, Indiana	Embassy Suites	Thursday, December 10, 1987
Somerset, New Jersey	Somerset Marriott	Friday, December 11, 1987
Swedeland, Pennsylvania	King of Prussia Hilton	Monday, January 25, 1988
Bethesda, Maryland	Marriott Pooks Hill	Wednesday, January 27, 1988
Chicago, Illinois	North Shore Hilton	Friday, January 29, 1988

Symposium attendance is free, but advance registration is required.

To register, contact Beckman Instruments, Inc., 1050 Page Mill

Road, Palo Alto, CA 94304, phone: 415/859-1431.

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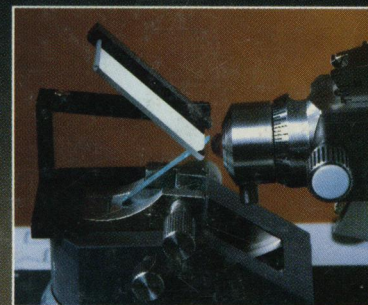
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THE RIGHT STUFF

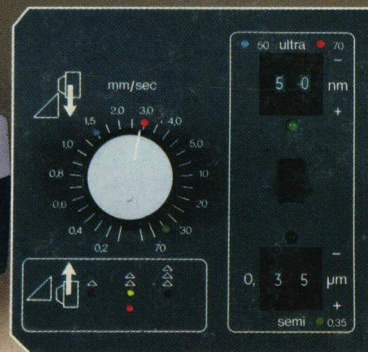
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Specimen transillumination



Mesacut 2 structure viewer



Dual automatic advance system and speed control

The Ultracut E couples the ultimate in precision with the ultimate in ease of operation for superior productivity and reproducibility.

A unique multi-illumination system provides six different lighting options. Specimen Trans-Illumination can be combined with both Incident Light and Darkfield Illumination for improved clarity of the specimen block and to aid in knife edge inspection. Optionally available, the Mesacut 2 Structure Viewer enhances precision trimming of a pyramid or mesa by permitting examination of the block face without disturbing the sectioning setting.

The Dual Automatic Advance System with independent digital settings allows the operator to vary the thickness within one ribbon of sections while choosing the setting that best fits his method and technique. The unique advance system and wide cutting speed range are designed for a pre-programmed efficient start of sectioning, simultaneously enhancing productivity and reproducibility.

The combination of superior viewing and operator control make the Ultracut E the right stuff for ultramicrotomy.

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We'll let you try the Ultracut E with no obligation to buy. You'll see that Reichert-Jung has the right stuff for you.

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(in NYS 800-462-1221)
or write for more
information.

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