

tary exploration. My suspicion is that although the moon is an oddball in some respects, we will eventually gain better insight by looking more carefully at other planets and their satellites. Meanwhile, I strongly recommend this book because it provides plenty of intellectual sustenance—but don't expect to find the answers in the back.

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Strings

Workshop on Unified String Theories. (Santa Barbara, CA, July 1985.) M. GREEN and D. GROSS, Eds. World Scientific, Singapore, 1986 (U.S. distributor, Taylor and Francis, Philadelphia). x, 745 pp., illus. \$79; paper, \$37.

In the wake of the 1984 renaissance of string theories numerous workshops, symposia, and conferences have been devoted to this exciting subject. This book contains the proceedings of a three-week workshop that took place in Santa Barbara in the summer of 1985. To judge by the table of contents the organizers, M. Green and D. Gross, set themselves the task of obtaining an overview of the full range of string theory both as practiced in the '70's and in the year preceding the workshop. To judge by the contents proper, they have succeeded handsomely.

At the outset important ideas and techniques from the '70's are described along with novel uses to which they can be put (C. Thorn, S. Mandelstam, L. Brink). These presentations should be useful to younger readers, who will thus be spared the effort of retrieving this material from the necessarily less focused original papers.

String theory has had a major impact in certain branches of mathematics, most notably on the theory of Kac-Moody algebras and the theory of sporadic groups. Conversely, major modern developments in topology, differential geometry, and Riemann surfaces find natural applications in string theory. Much of this remarkable physics-mathematics interplay is lucidly covered here (P. Goddard, D. Olive, I. Frenkel, J. Lepowsky, A. Meurman, O. Alvarez, E. Witten). These are presentations not readily paralleled elsewhere in the literature. Their inclusion gives this collection its most distinct flavor and may ensure its interest for a

long time to come. Superstrings, the star attraction, are rendered excitingly by Green and Gross.

String theories are two-dimensional conformally invariant field theories. Recently developed general techniques for dealing with such theories are elegantly presented (D. Friedan, S. Shenker).

One of the crucial open questions of string theory asks for the underlying geometry. A lot of work has been devoted to this problem over the last year and a half; some of the earlier work is covered here (W. Siegel, B. Zwiebach, T. Banks, M. Peskin). Another subject on which much remains to be done is spontaneous space-compactification in superstring theory. This along with the related, and up to now notoriously unyielding, phenomenological problems is the subject of many contributions (G. Horowitz, A. Strominger, and others). Numerous interesting contributions on special topics are also included.

The book ends on a nine-page pun/which properly trimmed would be more fun.

This book is certainly not the last word on strings, nor was it intended to be. Much of the recent material is susceptible to fast obsolescence; this is a fast-moving field after all. Still, some of the presentations may be useful to string theorists for some time to come.

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Books Received

Ape Language. From Conditioned Response to Symbol. E. Sue Savage-Rumbaugh. Columbia University Press, New York, 1986. xxx, 433 pp., illus. \$40. Animal Intelligence Series.

Applied Geochemistry in the 1980's. Iain Thornton and Richard J. Howarth, Eds. Halsted (Wiley), New York, 1986. xiv, 347 pp., illus. \$54.95. From a meeting, London, April 1983.

The Art of Creative Thinking. Robert W. Olson. Perennial Library (Harper & Row), New York, 1986. xiv, 265 pp., illus. Paper, \$5.95. Reprint, 1980 ed.

Artificial Intelligence. Principles and Applications. Masoud Yazdani, Ed. Chapman and Hall (Methuen), New York, 1986. xiv, 348 pp., illus. \$49.95; paper, \$22.

Astrometric Techniques. Heinrich K. Eichhorn, Robert J. Leacock, and Jeanne M. Kerrick, Eds. Published on behalf of the International Astronomical Union by Reidel, Dordrecht, 1986 (U.S. distributor, Kluwer, Norwell, MA). xxii, 838 pp., illus. \$144; paper, \$61.50. From a symposium, Gainesville, FL, Jan. 1984.

Biotechnology. Strategies for Life. Elizabeth Antebi and David Fishlock. MIT Press, Cambridge, MA, 1986. 239 pp., illus. \$39.95. Translated from the French edition (Neuilly-sur-Seine, France, 1985).

Central Actions of Acth and Related Peptides. David de Wied and William Ferrari, Eds. Liviana Press, Padua, Italy, and Springer-Verlag, New York, 1986. viii, 240 pp., illus. \$69. Fidia Research Series. Symposia in Neuroscience, vol. 4. From a conference, Villasimius, Italy, June 1985.

Evolutionary Processes and Theory. Samuel Karlin and Eviatar Nevo, Eds. Academic Press, Orlando, FL, 1986. x, 786 pp., illus. \$62.50; paper, \$34.50. Based on a workshop, Israel, March 1985.

The Experimental Manipulation of Ovule Tissue. G. P. Chapman, S. H. Mantell, and R. W. Daniels, Eds. Longman, New York, and Wiley, New York, 1986. xvi, 256 pp., illus. + plates. \$84.95. Monographs and Surveys in the Biosciences.

Fast and Slow Chemical Signalling in the Nervous System. L. L. Iverson and E. C. Goodman, Eds. Oxford University Press, New York, 1986. xiv, 316 pp., illus. \$47.50. Oxford Medical Publications. Based on a symposium, Harlow, England, May 1985.

Hormone Binding Sites in Plants. Michael Venis. Longman, New York, and Wiley, 1986. viii, 19 pp., illus. \$39.95. Research Notes in Plant Science.

How Far Are We from the Gauge Forces. Antonio Zichichi. Plenum, New York, 1985. x, 741 pp., illus. \$95. The Subnuclear Series, 21. From a course, Erice, Italy, Aug. 1983.

Immunology and Cancer. Margaret L. Kripke and Philip Frost, Eds. Published for the University of Texas System Cancer Center, M. D. Anderson Hospital and Tumor Institute, Houston, by the University of Texas Press, Austin, 1986. xii, 304 pp., illus. \$47.50. University of Texas M. D. Anderson Symposium on Fundamental Cancer Research, vol. 38. From a symposium, Houston, Feb. 1985.

The Lewin Legacy. Field Theory in Current Practice. Eugene Stivers and Susan Wheelan, Eds. Springer-Verlag, New York, 1986. xx, 281 pp., illus. Paper, \$28. Recent Research in Psychology. From a conference, Philadelphia, May 1984.

Little Science, Big Science ... and Beyond. Derek J. De Solla Price. Columbia University Press, New York, 1986. xxvi, 301 pp., illus. \$35; paper, \$14.95. A collection of 13 reprinted essays including those in Price's 1963 work, with added material by Robert K. Merton and Eugene Garfield.

Local and Global Methods of Nonlinear Dynamics. A. W. Sáenz, W. W. Zachary, and R. Cawley, Eds. Springer-Verlag, New York, 1986. viii, 263 pp., illus. \$26.40. Lecture Notes in Physics, 252. From a workshop, Silver Spring, MD, July 1984.

Mathematical Ecology. An Introduction. Thomas G. Hallam and Simon A. Levin, Eds. Springer-Verlag, New York, 1986. xii, 457 pp., illus. \$80. Biomathematics, vol. 17. Based on a course, Trieste, Italy, 1982.

Mathematics and Optimal Form. Stefan Hildebrandt and Anthony Tromba. Scientific American Library, New York, 1986 (distributor, Freeman, New York). xvi, 215 pp., illus. \$29.95.

Meaning and Context. An Introduction to the Psychology of Language. Hans Hörmann. Robert E. Innis, Ed. Plenum, New York, 1986. xiv, 294 pp., illus. \$35; paper, \$18.95. Cognition and Language. Translated, with revisions, from the German edition (Darmstadt, 1981).

Numerical Methods in the Theory of Neutron Transport. G. I. Marchuk and V. I. Lebedev. 2nd ed. Harwood Academic, New York, 1986. xx, 601 pp., illus. \$125. Translated and edited from the Russian edition (Moscow, 1981) by O. Germagenova.

Ocean Seismo-Acoustics. Low-Frequency Underwater Acoustics. Tuncay Akal and Jonathan M. Berkson, Eds. Plenum, New York, 1986. xvi, 915 pp., illus. \$135. NATO Conference Series 4, vol. 16. From a symposium, San Terenzo di Lerici, La Spezia, Italy, June 1985.

An Ontology of Consciousness. Ralph Ellis. Nijhoff, Dordrecht, 1986 (U.S. distributor, Kluwer, Norwell, MA). viii, 205 pp., illus. \$42. Martinus Nijhoff Philosophy Library, vol. 18.

Ore Fields and Continental Weathering. Jean-Claude Samama. Van Nostrand Reinhold, New York, 1986. x, 326 pp., illus. \$44.95. Evolution of Ore Fields Series. A Hutchinson Ross Publication.

Research Methods in Applied Behavior Analysis. Issues and Advances. Alan Poling and R. Wayne Fuqua, Eds. Plenum, New York, 1986. xiv, 337 pp., illus. \$39.50. Applied Clinical Psychology.

Residue Number System Arithmetic. Modern Applications in Digital Signal Processing. Michael A. Soderstrand *et al.*, Eds. The Institute of Electrical and Electronics Engineers Press, New York, 1986. viii, 418 pp., illus. \$50.95; to members, \$30.20. IEEE Press Reprint Series.

Supersymmetry and Its Applications. Superstrings, Anomalies and Supergravity. G. W. Gibbons, S. W. Hawking, and P. K. Townsend, Eds. Cambridge University Press, New York, 1986. xiv, 481 pp., illus. \$49.50. From a workshop, Cambridge, UK, June 1985.

Sweet Track to Glastonbury. The Somerset Levels in Prehistory. Bryony and John Coles. Thames and Hudson, New York, 1986 (distributor, Norton, New York). 200 pp., illus. \$29.95. New Aspects of Antiquity.

Products & Materials

Video Image Analysis

The ImagePlus 3.5 image analysis system measures and processes video images captured by macroviewers, optical microscopes, and electron microscopes. The system obtains global stereological parameters related to the full image field—such as number of features, area coverage, uniformity, relative spacing, and clustering—as well as feature-specific measurements—such as object dimensions, location, roughness (fractal dimension), brightness, and texture—from the original gray-scale image or from previously stored images. Two 800-kilobyte hard-shelled 3.5-inch disk drives store gray-scale and binary images and analytical results permanently. The user may make the image more amenable to measurement. A gray-scale image may be processed to correct uneven illumination, reduce noise, sharpen edges, and extract directional derivatives. A binary image may be edited to fill holes, smooth and separate touching borders through erosion and dilation, and skeletonize images for topological studies. An automatic convex segmentation routine separates overlapped features even for fields of objects of different sizes. Statistical operations interpret the measured data, plot distributions and correlations between variables, and provide comparisons by analysis of variance. Dapple Systems. Circle 529.

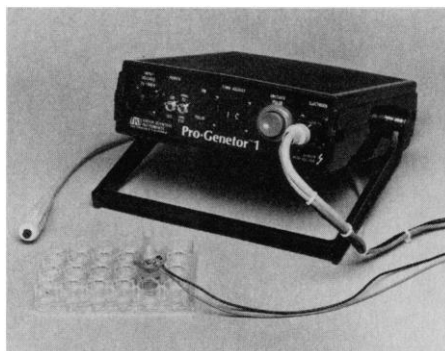
Tabular Grain Black-and-White Film

T-Max 100 and T-Max 400 films are black-and-white films with unusually high image quality that are designed for demanding applications, such as those in scientific and technical fields. T-Max 100 provides a better image than Panatomic-X 32 and T-Max 400 provides a better image than Plus-X Pan 125. The films' T-Grain technology increases the efficiency of the emulsion grains. The T-Grains provide a much larger surface area than conventional grains of the same mass and thus can adsorb large amounts of sensitizing dyes and other chemicals. Thus, for a given image quality, film with T-Grain will allow a much higher speed

than regular film, and, at a given speed, film with T-Grain will provide a finer grain and a sharper image. The T-Max films also may be exposed at a speed of 100 or pushed to 1600. The development times of T-Max 100 and T-Max 400 are similar enough that the films can be processed together in a single batch. Eastman Kodak. Circle 534.

Pulse Controller for Electroporation

The ProGenerator delivers precisely timed electrical pulses for reproducible results in electroporation. Pulses may be from 10 μ sec to 990 msec long, and the ProGenerator has nearly 200 small-increment time settings.



For effective electroporation, the ProGenerator delivers relatively long pulses at relatively low voltages. The pulse controller requires an external power supply; it accepts voltages of 20 to 500 direct-current voltage. A single ring electrode produces a voltage gradient of 40 to 800 V/cm, and the triple ring electrode produces a gradient of 180 to 3500 V/cm. Both electrodes may be flame sterilized. In the interests of safety, the ProGenerator has been designed so that two hands are required to deliver a pulse. Hoefer Scientific Instruments. Circle 527.

159-Megabyte Hard Disk

The RD54 disk is a high-capacity, 5.25-inch Winchester-technology hard disk for MicroVAX II computers and VAXstation II/GPX computer work stations. The RD54 disk uses thin-field media and advanced read/write heads. It has an average access time of 38.3 msec and a transfer rate of 625 kilobytes per second. Each RD54 stores up to 159 megabytes; three RD54's can be coupled to provide 477 megabytes of disk storage in a single system. The RD54 is designed for environments in which storage requirements are large, but where space and economic considerations dictate a compact desk-side hard disk system. Digital Equipment. Circle 530.

Laser Printer

The Laserline 6 is a user-upgradable laser printer with plug-in personality modules. With the multiuser module, up to three users may share the printer. Fifteen typeset-quality fonts reside in the printer; additional fonts may be added as optional cartridges. The 128-kilobyte page-image buffer can be expanded to 512 kilobytes with an optional memory-expansion cartridge. The printer's output stacker eliminates page shuffling by allowing for facedown, correct-order stacking. The Laserline 6 prints six pages per minute and is compatible with Microsoft Word, Wordstar 2000, Lotus 1-2-3, software for the LaserJet, and many other programs. The printer has a footprint of approximately 43 by 64 cm. Okidata. Circle 531.

Siliconized Glass Sample Containers

I-Chem siliconized glass bottles, jars, and vials prevent leaching of trace metals into solution, reduce adsorption of polar compounds, proteins, and trace metals, and protect samples against the possible effects of hydroxyl radical sites that are often present on glass. These sample containers have Teflon-lined lids and are available chemically cleaned to U.S. Environmental Protection Agency specifications. I-Chem Research. Circle 585.

Literature

The New Product Brochure provides descriptions and specifications for a line of balances, density meters, and application packs. Mettler Instrument. Circle 537.

IBM PC Systems Handbook for Scientists and Engineers: Data Acquisition and Instrumentation is devoted to components and systems for IBM PC, XT, and AT computers. The price is \$12.95. CyberResearch. Circle 538.

Gears for Laboratory Instrumentation and Robotics is a catalog that offers 3000 sizes of chemical-resistant gears. Globe Gear Company. Circle 576.

Disposable Tubes at a Glance features 116 types of disposable tubes, including some that are biologically inert, chemically stable, or have color-coded labels. Fisher Scientific. Circle 577.

Ultracentrifugation Expert System discusses a software program for ultracentrifugation. Beckman Instruments, Spinco Division. Circle 578.

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.

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Box (give number)
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1333 H Street, NW
Washington, DC 20005

POSITIONS WANTED

Biochemist/Cell Biologist, Ph.D. Experience in angiogenesis-related growth factor control of cell proliferation (one patent) and connective tissue research and development. Publications in both areas. Seeks industrial or academic position, research or administration, with East Coast location. Box 194, SCIENCE. X

Biochemist, Ph.D. Experienced in plant biochemistry, microbial metabolism, natural products isolation and characterization, amino acid metabolism, lipid metabolism, protein purification, and HPLC. Seeks industrial position. Box 199, SCIENCE. 11/21, 28

Bio-Organic/Biochemist, Ph.D. 1982. Experienced in protein purification, isolation, and HPLC, as well as organic synthesis. Hands-on experience with ESR and FT-NMR. Publications and postdoctoral experience. Seeking R&D position in Mid-Atlantic states. Box 204, SCIENCE. X

Biologist/Entomologist, Ph.D. Experienced, award-winning teacher. Broad research background including: transplant surgery, microbial bioassay, insecticide efficacy, ecology, and pest management. Seeks teaching and/or research position in biology/entomology department. Write: 1824 1/2 Nipomo Street, San Luis Obispo, CA 93401. X

Entomologist/Toxicologist, Ph.D. imminent, seeks challenging position involved with the data analysis, risk assessment, and management of xenobiotic chemicals. Industrial experience as analytical chemist. Present research in pesticide behavioral toxicology. Available January 1987. Box 202, SCIENCE. X

POSITIONS WANTED

British Acarologist with a Ph.D. from the Department of Medical Entomology, London School of Hygiene and Tropical Medicine, London University (1979) with many publications on the ultrastructure of soft and hard tick internal organs and good background in entomology and EM techniques is seeking a job starting from August/September 1987. Send for curriculum vitae from: Dr. M. Samir, Sciences and Mathematics Center, Makkah P.O. Box 2064, Kingdom of Saudi Arabia. Box 192, SCIENCE. X

Light/Electron Microscopist. More than 15 years of experience in histology, SEM and LEM, including DNA spreading and ultrathin sectioning; excellent references. Seeks position in Boston area for 1987. Box 186, SCIENCE. X

If you need a **Ph.D. Consulting Scientist** and general tutor, please write or telephone: Dr. Ghouri, 509 Connie Lane, Manchester, MO 63011; telephone: 314-394-0589. X

Research Biotechnology, M.S. with industrial experience, desires challenging laboratory position. Laboratory experiences include molecular biology, recombinant DNA, fermentation scale-up, microbial strain and process development, and utilization of radioisotopes. Separations techniques include: LC, HPLC, agarose/polyacrylamide electrophoresis, ultrafiltration, and supercritical fluid extraction. Box 208, SCIENCE. 11/21, 28; 12/5, 12, 19

Symbiologist, frontiersperson, regeneration technophile seeks position in forward-looking, regeneration-oriented industry, agency, or academic department. Strong interest in uses of sustainable biological processes for resource management. Currently U.S. Department of Agriculture postdoctoral fellow studying N₂-fixing actinomycetes (*Frankia*) from root nodules of actinorhizal plants. Former professor, taught general and pathogenic microbiology, immunology, and general biology for 10 years. Available August 1987. Box 195, SCIENCE. 11/21, 28

Vice President Scientific Affairs, Ph.D., director product development, medical diagnostics. Experience in technology assessment, administration/management, marketing support, QC/Reg, and medical writing. Seeks industrial/university research or consulting position. Box 207, SCIENCE. X

POSITIONS OPEN

ANATOMIST SCHOOL OF MEDICINE SOUTHERN ILLINOIS UNIVERSITY

The Department of Anatomy invites applications for a tenure-track position at the **assistant or associate professor** level. Qualified candidates must have a Ph.D. or M.D. degree, at least 2 years of postdoctoral experience, willingness to teach medical students in gross anatomy and at least one other anatomical discipline, and demonstrated ability to perform independent research. Special (but not exclusive) consideration will be given to neuroscientists and reproductive/cellular biologists. Send curriculum vitae, a letter specifying teaching interests and research plans, and at least three reference letters by 15 January 1987 to: **Anatomy Search Committee, School of Medicine, Southern Illinois University, Carbondale, IL 62901.** Southern Illinois University at Carbondale is an Equal Opportunity/Affirmative Action Employer.

ANATOMIST, ASSISTANT PROFESSOR, tenure-track. Primary teaching, neuroanatomy; secondary, assist in gross anatomy laboratory. Research open; preference for neuroscience or cell biology projects utilizing TEM, SEM, cytochemistry, and/or immunocytochemistry. Please submit curriculum vitae, outline of research interests, and names of three references to: **Dr. William E. Dossel, Chairman, Anatomy Department, Creighton University School of Medicine, 2500 California, Omaha, NE 68178.**

POSITIONS OPEN

AIR TOXICS ANALYST Idaho Air Quality Bureau

The Idaho Air Quality Bureau has an immediate opening in its Boise office for an individual interested in establishing and conducting a toxic air emission program. The position is in the Bureau's Planning and Permits Section. The individual must possess the ability to assess toxic exposure risks, evaluate environmental data, and prepare concise and defensible reports on the interpretation of the most up-to-date literature on toxic air emission health impacts. The salary range for this position is \$22,200 to \$29,700 per annum. For application information contact: **Bob Groves, Idaho Air Quality Bureau, Division of Environment, 450 West State Street, Boise, ID 83720; telephone: 208-334-5898.** Equal Opportunity Employer, M/F/H/V.

ANATOMY FACULTY POSITION

Ph.D. or equivalent. Anatomist to teach neuroanatomy and assist in teaching gross anatomy to first-year medical students. Primary interest should be in developing teaching excellence. Development of a research program with eventual independent funding is encouraged. Research interests are open. Salary commensurate with qualifications and rank. Send curriculum vitae and three references by **5 December 1986** to:

Dr. Tage Kvist
Assistant Dean for Basic Sciences
Department of Anatomy
Philadelphia College of Osteopathic Medicine
(PCOM)
4150 City Avenue
Philadelphia, PA 19131

Starting date as early as 1 January 1987. PCOM is an Equal Opportunity Employer.

California State University, San Bernardino invites applicants for a tenure-track position in the Department of Biology, available September 1987. Appointment is at the rank of **ASSISTANT PROFESSOR OR ASSOCIATE PROFESSOR** (\$25,812 to \$39,168 for the academic year) based on experience. We offer B.A., B.S., and M.S. degrees in biology. Qualifications: Ph.D. in molecular biology or related fields. Expertise in developmental biology and in cellular biology and previous teaching experience will be in the candidate's favor. Deadline for application will be 15 March 1987. Submit letter of application, curriculum vitae, and three letters of recommendation to: **Dr. Sarojam K. Mankau, Department of Biology, California State University, 5500 University Parkway, San Bernardino, CA 92407.** An Equal Opportunity, Affirmative Action, Section 504, Title IX Employer.

UNIVERSITY OF CALIFORNIA (UC), SAN DIEGO

The Department of Psychology at the University of California, San Diego anticipates hiring assistant professors in tenure-track positions. It is expected that employment will begin in the 1987 to 1988 academic year. Although the department is interested in all outstanding candidates in experimental psychology, emphasis will be placed on the following areas: Cognitive science, physiological psychology and neuroscience, developmental psychology, and applied experimental/social psychology. Within each of these areas, we will search for excellence rather than specific area of interest. Candidate must have a Ph.D., preferably in experimental psychology emphasizing one of the above areas. Candidate must be able to conduct independent, publishable research and teach undergraduate and graduate classes in area of specialization. Salary commensurate with qualifications and based on UC pay scale. Please send curriculum vitae, reprints, and names of three referees. Complete applications must be received before 30 January 1987.

Please apply to relevant search committee(s):

Search Committee (Cognitive Science) and/or Search Committee (Physiological and Neurosciences,) and/or Search Committee (Developmental) and/or Search Committee (Applied Social and Experimental)
Department of Psychology C-009
University of California, San Diego
La Jolla, CA 92093

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POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR OF BIOCHEMISTRY AND MOLECULAR BIOLOGY—The Department of Biochemistry and Molecular Biology, Louisiana State University (LSU) School of Medicine in Shreveport, invites applications for two tenure-track positions at the assistant professor level. Candidates with a strong background in molecular biology, molecular genetics, membrane and protein biochemistry, and molecular virology are especially encouraged to apply; however, outstanding candidates in other areas of biochemistry will definitely be considered. Applicants should submit curriculum vitae, description of current and/or future research program, and have three letters of reference sent by 15 December 1986 to: **Dr. Richard Courtney, Chairman, Department of Biochemistry and Molecular Biology, LSU Medical Center, 1501 Kings Highway, Shreveport, LA 71130. An Affirmative Action/Equal Opportunity Employer.**

ASSISTANT/ASSOCIATE PROFESSOR OF PHYSIOLOGY

Applications are solicited for a tenure-track position at the rank of assistant/associate professor in the **Department of Physiology, College of Veterinary Medicine, Michigan State University (MSU)**. Candidates must have a D.V.M. degree or the equivalent and advanced research training and experience in physiology. Opportunities are available for both collaborative and independent research and for undergraduate, graduate, and professional student teaching. A strong commitment to animal health research is required. Interested individuals should submit a complete curriculum vitae and bibliography and the names and addresses of three references to: **Dr. N. E. Robinson, Chairman Search Committee, Department of Physiology, Giltner Hall, Michigan State University, East Lansing, MI 48824-1101. MSU is an Equal Opportunity/Affirmative Action Employer.** Applications should preferably be submitted by 1 January 1987, but will be considered until the position is filled.

ASSISTANT PROFESSOR (TENURE TRACK), Department of Obstetrics and Gynecology, with research interest in HPV and related areas. The Ph.D. applicant will be expected to develop a strong research program in areas complementing those of the current faculty. The appointee will assist in the direction of gynecologic oncology-related research. Salary commensurate with experience. Send curriculum vitae, reprints of publications, a statement of research interests, and the names of three references to:

Vicki V. Baker, M.D.
Department of Obstetrics and Gynecology
University of Alabama Medical Center
OHB Room 550, University Station
Birmingham, AL 35209

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ASSISTANT PROFESSOR OF PHARMACOLOGY. Applications are invited for a junior level tenure-track position. Excellent research facilities, equipment, and funding are available. The successful candidate is eventually expected to generate independent research support. Departmental interests include neuropharmacology (molecular approaches), neurotoxicology, drug metabolism, molecular endocrinology, immunopharmacology, and receptor studies. A commitment to medical school teaching in pharmacology is required. The department has an active graduate training program. This position will be available after 1 January 1987.

Ph.D. in pharmacology or M.D. degree required; advanced training in pharmacology highly desirable. Uniformed Services University of the Health Sciences is a federally funded school of medicine which trains physicians serving the military forces. Faculty salary structure, benefits, tenure, and promotion policies are similar to those at private or state-funded schools of medicine.

Send curriculum vitae, statement of research interests, and names of three referees by 31 December 1986 to: **Dr. L. Aronow, Department of Pharmacology, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814-4799.**

POSITIONS OPEN

ASSISTANT PROFESSORS DEPARTMENT OF BIOLOGY NORTHEASTERN UNIVERSITY

The Department of Biology at Northeastern University invites applications for three tenure-track positions at the assistant professor level to begin in September 1987.

One opening in **marine molecular biology** or **marine biochemistry**—the successful candidate will be expected to bridge the gap between marine biology and molecular biology/biochemistry and to participate in the program of the Marine Science and Maritime Studies Center at Nahant, MA.

One opening in **plant physiology** or **plant molecular biology**—candidate must develop a research program in one of these areas; teaching responsibilities include courses in general plant biology, plant physiology, and area of specialization.

One opening in **comparative animal physiology**—candidates in systems level specialties who complement the interests of current faculty are especially encouraged to apply; because teaching responsibilities include undergraduate human anatomy/physiology, as well as graduate courses in the area of specialization, a solid foundation in vertebrate physiology is necessary.

Candidates for all positions must have a Ph.D. and at least 1 year of relevant postdoctoral experience and must have demonstrated potential to develop an externally funded research program. The Department of Biology is committed to excellence in research and teaching and has been strengthening its programs with additional faculty and facilities. Send curriculum vitae, a description of research plans, and the names of three references by 31 December 1986 to: **Search Committee, Department of Biology, Northeastern University, 360 Huntington Avenue, Boston, MA 02115. Northeastern University is an Equal Opportunity/Affirmative Action, Title IX, University.**

ASSISTANT PROFESSOR CELL AND MOLECULAR BIOLOGY

The Laboratory of Molecular Biology and the Department of Genetics of the University of Wisconsin—Madison invite applications for a joint, tenure-track position at the rank of assistant professor. Candidates should have research interests in cell or molecular biology to include, but not be restricted to, genetic approaches. Within this broad area, emphasis will be placed on selecting an outstanding individual. Responsibilities will include teaching in the Genetics Department's curriculum, participating in the Interdepartmental Program in Cell and Molecular Biology, supervision of graduate students, and development of an independent research program. Salary will be on a 12-month basis; it will be commensurate with the experience of the candidate and compatible with the salary structure of the University of Wisconsin. To ensure consideration, applicants should submit curriculum vitae, a statement of research interests, and have three letters of reference sent by 15 January 1987 to: **Gary G. Borisy, Chairman, Laboratory of Molecular Biology, University of Wisconsin, Madison, WI 53706.**

The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer; applications from minority and women candidates and other qualified persons are encouraged.

ASSISTANT PROFESSORS, MACROMOLECULAR CRYSTALLOGRAPHY. The Department of Chemistry and the Waksman Institute of Rutgers University invite applications for tenure-track assistant professorships in the area of macromolecular crystallography. Outstanding individuals at the senior level will also be considered. A Ph.D. in macromolecular crystallography or a related field is required and postdoctoral experience is preferred. Substantial start-up funds are available for these positions. Candidates should have the potential for establishing a vigorous, independent research program. Please submit curriculum vitae, a brief summary of research interests, and arrange for three letters of reference to be sent to: **The Search Committee, Macromolecular Crystallography, Department of Chemistry, Rutgers, The State University of New Jersey, P.O. Box 939, Piscataway, NJ 08854.** Applications must be received by 30 November 1986. *Rutgers University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT—ASSOCIATE PROFESSOR

The Department of Molecular Pathology at the M. D. Anderson Hospital and Tumor Institute is seeking to fill a tenure-track position for a molecular biologist/biochemist with research interests in cellular oncogenes. An M.D. and/or Ph.D. and postdoctoral experience are required. Interested candidates should send their curriculum vitae, a brief description of future research interests, and the names of three references to: **Ralph B. Arlinghaus, Ph.D., Chairman, Department of Molecular Pathology (Box 85), University of Texas System Cancer Center, M. D. Anderson Hospital and Tumor Institute, 6723 Bertner Avenue, Houston, TX 77030. An Affirmative Action/Equal Opportunity Employer.** Deadline for application materials is 1 January 1987.

BIOLOGICAL SCIENCES—ASSISTANT OR ASSOCIATE PROFESSOR. Teach genetics and other advanced courses in area of interest including radiation biology, if possible. Participate in general biology sequence. Ph.D. in biology, botany, or genetics with interest in undergraduate teaching. Nine-month, tenure-track appointment. Summer teaching possible. Employment date 1 September 1987. Rank and salary negotiable. Send application letter, résumé, and names of three recent references by 1 January 1987 to: **Dr. Carl Hoagstrom, Chairman, Department of Biological Sciences, Ohio Northern University, Ada, OH 45810. Affirmative Action/Equal Opportunity Employer.**

Tenure-track **ASSISTANT PROFESSOR IN ANATOMY**. Earned doctorate required; strong training in classical gross anatomy desired. Preference given to anatomists who also have a broad general biology background; teaching experience at the college level; experience supervising student research. Duties: teaching courses in anatomy (introductory and advanced) and general biology; student advising; program development; supervising student research. Send résumé, all transcripts, and three letters of reference to: **E. Christian, Chair, Department of Biological Sciences, California State University, Sacramento, 6000 J Street, Sacramento, CA 95819.** Application deadline: 30 January 1987. *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF INNOVATION STUDIES MIT SLOAN SCHOOL OF MANAGEMENT

Tenure-track position at the MIT Sloan School of Management in studies related to the technological innovation process.

A Ph.D. is required in an area of the social sciences or engineering. Real world experience in some aspect of the technological innovation process is very desirable.

Candidates should have research interests in one or more of the many areas critical to understanding the technological innovation process and successful innovation management.

Examples:
How do firms best manage technical groups/careers?
How do innovators capture benefit from their technology-based innovations?
How can innovation and R&D performance best be measured?
How can more effective RD&E and manufacturing organizations be designed?

Send résumé, dissertation abstract and/or research papers to: **Professor Eric von Hippel, MIT E52-537, 50 Memorial Drive, Cambridge, MA 02139.**

MIT is an Equal Opportunity/Affirmative Action Employer.

State University of New York (SUNY) at Stony Brook. ASSISTANT PROFESSOR SCIENCE EDUCATION. Tenure-track position September 1987. Ph.D. in chemistry or earth and space sciences with evidence of achievement in science education or Ph.D. in science education with strong disciplinary background. Teach/research in science teacher preparation; develop extension program. Applications and names of three references to: **L. G. Paldy, Center for Science, Mathematics and Technology Education, SUNY—Stony Brook, Stony Brook, NY 11794-3733. SUNY—Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer.** AK number 268-C.



WHEN ATTENTION TURNS TO THE MARINE ENVIRONMENT, THE WORLD TURNS TO BATTELLE.

BATTELLE, THE NATION'S LEADER IN CONTRACT RESEARCH IN OCEANOGRAPHIC SCIENCES, IS SEEKING CANDIDATES TO FILL SEVERAL POSITIONS.

Plankton Biologist

To develop and manage programs in population dynamics and ecology of nearshore and oceanic plankton. Applicants should be capable of dealing with several plankton disciplines, including phytoplankton, zooplankton, and meroplankton. Familiarity with marine food-chain dynamics and ecology of the marine micro-layer is essential.

Hardbottom Benthic Ecologist

To develop and manage programs dealing with ecology of epifauna on hardbottom substrata of intertidal and subtidal environments. Experience with ROVs or submersibles essential.

Water Quality Biologist

To develop and manage programs dealing with nearshore pollution problems, especially those related to ocean outfalls. Experience with EPA water quality regulations and those microbiological and chemical regulations governing placement and maintenance of sewage outfalls should be demonstrated. Individual will work closely with chemists in providing guidance to municipal water agencies.

Environmental Impact Assessment Specialist

To expand our EIS group in assessment of marine environmental issues. Experience with ocean dumping, dredge spoil or waterfront development issues helpful. Applicant must demonstrate ability to manage multidisciplinary programs.

Requirements: Ph.D. or equivalent experience with one of the above disciplines, a strong publication record, history of successful funding, evidence of good client relations, and experience in project management.

Application: Please submit an up-to-date resume, names of three references, reprints of three recent publications or reports, and letter expressing interest and qualifications.

Marine Environmental Chemists

• **Research Leader/Senior Research Scientist** – Individual should have strong academic credentials and 5+ years' experience in conducting and marketing contract research. An individual with national recognition and strong interpersonal and writing skills is preferred.

• **Project Manager** – Candidate should be an experienced manager (2-5 years) of medium-sized interdisciplinary programs for Government or Industry. Experience with projects involving the Ocean Sciences is necessary.

• **Research Scientist** – We are looking for a highly motivated individual with an advanced degree in Environmental or Analytical Chemistry or in Chemical Oceanography to participate in on-going contract research activities and help to generate new opportunities. Strong writing and interpersonal skills should accompany strong technical knowledge.

• **Researcher** – We are looking for an individual with a knowledge of marine environmental science and/or marine chemistry and strong writing and organizational skills to assist in the preparation of technical guidance documents and other written documents or reports. B.S. or M.S. degree and relevant experience required.

• **Task Leaders** – Candidates should have experience in conducting and managing medium to large scale laboratory tasks.

• **GC/MS Operator/Facilities Manager** – Candidate should have 4 or more years' experience in GC/MS analysis of environmental samples and experience in managing GC/MS facility. Experience with Finnigan 4530 or H-P GC-MSD desired.

Battelle offers competitive salaries and comprehensive employee benefits.

Please direct your resumes to Ms. Joan Sundstrom, Battelle New England Marine Research Laboratory, 397 Washington St., Duxbury, MA 02332.

An equal opportunity employer, M/F

POSITIONS OPEN

ASSISTANT PROFESSOR OF PHARMACOLOGY

The Department of Pharmacology in the College of Medicine of the University of Tennessee, Memphis invites applications from individuals with strong research credentials in biochemical neuropharmacology or neuroendocrinology for a tenure-track position, available immediately, at the level of assistant professor. Applicants must have a Ph.D. and/or M.D. degree, have completed not less than 2 years of postdoctoral training, and have a demonstrated ability to conduct independent research. Preference will be given to applicants who apply modern approaches in biochemistry, immunology, or molecular biology to research problems in neuroscience as related to pharmacology.

Closing date is 1 January 1987. Please submit curriculum vitae, statement of research interests, and arrange for three letters of reference to be sent to: **Dr. William R. Crowley, Department of Pharmacology, University of Tennessee, Memphis, 874 Union Avenue, Memphis, TN 38163.** *The University of Tennessee is an Equal Opportunity/Affirmative Action Employer.*

THE OHIO STATE UNIVERSITY COLLEGE OF EDUCATION

ASSISTANT PROFESSOR: SCIENCE EDUCATION/PHYSICS OR CHEMISTRY: Joint appointment between the College of Education and the College of Mathematics and Physical Sciences. Candidate will have responsibility for the development of a sequence of physical science courses for preservice teachers. There will be opportunities for teaching courses to graduate and undergraduate students. The candidate will be expected to develop a research program in science education. Qualifications include: a doctorate, graduate degrees in both science education and a science area (physical science, physics, or chemistry), equivalent of 3 years of teaching experience at the pre-college level, and competence for science education development, research, and writing. Résumé, credentials, and the names of at least three references should be sent to: **Dr. Donald P. Anderson, Dean, College of Education, The Ohio State University, 1945 North High Street, Columbus, OH 43210.** Deadline for receipt of applications is 31 January 1987. *The Ohio State University is an Equal Opportunity Employer.*

ASSISTANT RESEARCH BIOCHEMIST. Knowledge of DNA methylation, cell differentiation, and tumorigenesis required. Duties: Research and analyze the effect of DNA-binding proteins on DNA methylation, gene expression, and tumorigenesis using protein chemistry, molecular biology, and cell culture techniques. Job location/interview, Los Angeles. Salary, \$18,000 per year. Send this ad and your résumé/letter stating your qualifications to: **Job number CR8715, P.O. Box 9560, Sacramento, CA 95823-0560.** Not later than 6 December 1986.

ASSOCIATE MEMBER (NEUROSCIENCES)

A non-profit research institute seeks a senior level staff scientist to coordinate and develop research on chronic Epstein-Barr virus syndrome and related neuropsychiatric disorders. The candidate should have a Ph.D. in either biochemistry or neurosciences with at least 10 years of multidisciplinary experience in the fields of immunology, biochemistry, neurosciences, and some virology. The individual must have experience of research and development both in clinical and basic research setting; supervisory skills are required. For this position, we seek an active, energetic, and independent investigator who has an excellent record of productivity proven by good quality publications. Salary commensurate with professional experience. Qualified persons should forward curriculum vitae and references to: **Box 205, SCIENCE.**

BIOLOGY. Tenure-track; assistant professor. Teach general biology, invertebrate and vertebrate zoology, and animal physiology. Ph.D., commitment to liberal arts, and evidence of scholarly interest in biology within an institution dedicated to excellence in teaching are expected. Send résumé, transcript, and three letters of reference to: **David Lyon, Chair, Department of Biology, Cornell College, Mt. Vernon, IA 52314,** by 15 January. *An Affirmative Action/Equal Opportunity Employer; Cornell actively seeks women and minority candidates.*

POSITIONS OPEN

ASSOCIATE RESEARCH ENGINEER for enzyme manufacturer in north central Ohio. Will carry out assignments in laboratory and/or pilot plant under minimum supervision. Will be closely involved in various aspects of enzyme production process, including micro-organism growth and separation, microbial fermentations, gas and sugar analyses, and computer controls. Requires M.S. in biochemical or chemical engineering and 2 years of training in microbial fermentations. The education and/or training must have included: 1 year of experience/research in sugar analysis using wet chemical analysis and associated instrumentation, as well as high-pressure liquid chromatography for sugar concentration analysis; 1 year of experience in operating computers and electronics equipment for interface between computers and sensor instruments (that is, oscilloscope, digital/analog converters, operational amplifier, solid-state relays, and signal processors); 1 year of experience/research with membrane separation and recovery equipment and the theory of membrane separation; 1 year of experience using assembly, Fortran and Basic computer languages; 1 year of experience/research in enzyme analysis and processing. Forty hour week (8 a.m. to 4:30 p.m.), plus frequent late nights and weekends. Salary: \$29,000 per year. Send résumé with this ad to: **L. Ellison, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216, Attention JO number 0572228.**

BIOCHEMISTRY OF PROTEINS UNIVERSITY OF MAINE

A tenurable assistant professorship is available in the Biochemistry Department, University of Maine, for a person who will develop a research program focusing on some aspect of proteins, for example, peptide hormones, membrane receptors, cytoskeleton, enzymes, or others. The appointee will share newly constructed facilities with biochemists, molecular and cellular biologists, immunologists, and geneticists working with plant, animal, and microbial systems. Interest in developing collaborations within that group and in developing contacts with the biotechnology and natural products based industries of Maine will be an advantage. The appointee will also participate in the graduate and undergraduate teaching programs of the Biochemistry Department and of the Molecular and Cellular Biology Program. Apply with curriculum vitae, a detailed description of proposed research, and minimum of three reference letters to: **Dr. Robert Roxby, Biochemistry Department, University of Maine, Orono, ME 04469.**

BIOCHEMISTRY FACULTY POSITIONS RICE UNIVERSITY

The Department of Biochemistry at Rice University invites applications for two faculty positions at the level of assistant professor. Clear evidence of research ability and scholarship are essential requirements. Outstanding candidates with expertise in any field of biochemistry and molecular biology are encouraged to apply. Send résumé, a brief outline of future research plans, and at least three letters of reference to: **J. S. Olson, Chairman, Department of Biochemistry, Rice University, P.O. Box 1892, Houston, TX 77251.** *Rice University is an Equal Opportunity/Affirmative Action Employer.*

BIostatistician

A research faculty position in biostatistics is available at the Savannah River Ecology Laboratory (SREL) of the Institute of Ecology, University of Georgia. Candidates must be U.S. citizens, have a Ph.D. in statistics, biostatistics, or statistical ecology, and a strong publication record. Faculty rank and salary are negotiable. Major responsibilities include developing a strong, independent research program in biostatistics and interacting with SREL's research ecologists. Candidates will have access to microcomputers, the VAX 11/740, IBM 3081 and Cray computer systems, and statistical packages including SAS and SPSS. Interested persons should send a letter of application, curriculum vitae, copies of transcripts, brief statement of research interests and goals, selected reprints, and four letters of reference to: **Dr. William D. McCort, Chairman, Biostatistician Search Committee, Savannah River Ecology Laboratory, Drawer E, Aiken, SC 29802; telephone: 803-725-2472,** by 9 January 1987. *The University of Georgia is an Equal Opportunity/Affirmative Action Institution.*

POSITIONS OPEN

BIOCHEMISTRY POSTDOCTORAL POSITION. Available immediately for research on mechanism of action of tumor-elaborated factors. Tissue culture experience essential. Send curriculum vitae with names of two references to: **Dr. Olga Greengard, Annenberg number 5085, Department of Pediatrics, THE MOUNT SINAI MEDICAL CENTER, One Gustave L. Levy Place, New York, NY 10029.** *An Equal Opportunity Employer.*

BIOLOGIST: Cell/molecular biologist for broadly based department. Teach introductory biology and cell or molecular biology. Assistant professor rank; Ph.D. required. Beginning fall 1987. Send letter of application with names and addresses of three references by 12 December 1986 to: **Dr. John Shontz, Chairperson, Department of Biology, Grand Valley State College, Allendale, MI 49401.** *Equal Opportunity/Affirmative Action Employer.*

CELL/MOLECULAR BIOLOGISTS

The Department of Anatomy and Cell Biology, Medical University of South Carolina is continuing to expand its research strength in the area of SECRETION. Applications are invited for two or more positions at the levels of tenure-track assistant professor through tenured full professor. We are seeking individuals who will establish independent research programs and who would benefit by taking multidisciplinary approaches to this problem. We are particularly interested in scientists working on the regulation of gene expression, intracellular trafficking of secreted proteins, and intracellular signaling, but welcome applications from all individuals using modern, innovative techniques to investigate the secretory process.

Interested individuals should send curriculum vitae and the names of three referees to:

**Dr. L. Stephen Frawley
Department of Anatomy and Cell Biology
Medical University of South Carolina
171 Ashley Avenue
Charleston, SC 29425-2203
Telephone: 803-792-3526**

CELL BIOLOGIST-PHYSIOLOGIST. Teach undergraduate courses in both fields and direct undergraduate research. Teach entry-level courses in liberal arts context. Ph.D. required. Prefer teaching experience, knowledge of computer data acquisition. Noncitizens must have permanent residency, work permit. *Affirmative Action/Equal Opportunity Employer.* Send curriculum vitae, transcripts, and three reference letters to: **Dr. W. B. Julian, Dean's Office, Central College, Pella, IA 50219,** by 1 January 1987.

CELL BIOLOGY/IMMUNOLOGY: Undergraduate college seeking Ph.D. to teach upper level courses in cell biology and molecular biology/immunology for biology and medical technology majors. Research encouraged. Tenure-track assistant professor. Send application and letters of recommendation to: **Dr. Ronald Lucchino, Biology Department, Utica College of Syracuse University, Utica, NY 13502.** Closing date: 15 December. *Affirmative Action/Equal Opportunity Employer.*

CELL SORTER/FLOW CYTOMETER OPERATORS. Sloan-Kettering Institute. We seek qualified candidates to be considered for technical support opportunities in our research program areas. Responsibilities include operating, maintaining, troubleshooting, and assisting in the development of new techniques, applicable to the use of sophisticated cell sorter systems. You will also interact with users in the planning, analysis, and interpretation of experiments. Experienced personnel are sought to work with the following systems: (Coulter EPICS V with argon laser and EAST 88 analyzer) (Becton Dickinson FACS-IV). B.S./B.A. in the natural sciences is required. A background in computer-based data analysis necessary. Experience with fluorescent staining methods and optical concepts a must. We offer an excellent compensation package, a state-of-the-art environment, and a superb opportunity for career development. Please send résumé to: **E. L. Kleinert, Personnel Department, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.** *Equal Opportunity Employer, M/F/H/V.* Where the exception is the rule.

Postdoctoral Scientist Enzymology

The Department of Medicinal Chemistry at SK&F has an immediate opening for a postdoctoral scientist to work in an environment designed to foster innovative research and promote personal and professional growth. Publication of research in leading journals and interaction with the scientific community are strongly encouraged. Postdoctoral appointments are normally of two years duration.

The successful candidate will be involved in the isolation of previously uncharacterized viral enzymes obtained as cloned products from bacterial and yeast expression systems, structural characterization of the purified enzymes, and will contribute to kinetic analysis to determine the chemical mechanisms of the enzyme-catalyzed reactions. The candidate will also interact with synthetic chemists to assist in the design of enzyme inhibitors of therapeutic potential, and characterize enzyme-inhibitor interactions.

The successful candidate will have:

- Ph.D. in Bio-Organic Chemistry, Biochemistry or equivalent.
- Experience in enzyme isolation, structural characterization, and the development of specific enzyme assays.
- Experience in kinetic analysis of enzymatic reactions using steady-state methods, and a working knowledge of biological reaction mechanisms. Familiarity with molecular biological methods is desirable.

We are located near Valley Forge, PA, in a new state-of-the-art research complex and offer an excellent salary, benefits, and relocation package. Please forward your c.v. to George P. Kissell, Jr., Manager, Personnel Relations, 1552 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.

SK&F
A SmithKline Beckman Company

POSTDOCTORAL FELLOWSHIPS at the Woods Hole Oceanographic Institution

Ocean Science and Engineering

Applications are invited from new or recent doctorates in science or engineering with interests in physical oceanography, marine chemistry, marine geology and geophysics, biological oceanography, or oceanographic engineering. Recipients of awards are selected on a competitive basis, with primary emphasis placed on research promise.

Marine Biomedical Research

Applications are invited from new or recent doctorates with interest and expertise in traditional areas of basic biomedical research, such as toxicology and pharmacology, reproductive biology, biochemistry, and molecular biology, as well as in the area of natural products to be applied to research in the development and use of marine models for biomedical research, and understanding of the chemical ecology of marine animals.

Marine Policy and Ocean Management

Research fellowships are offered to individuals in the social sciences, law, the humanities, or natural sciences to apply their training to problems or issues that involve the use of the oceans. Presently research follows thematic areas such as Marine Science and Public Policy; Development and Management of Ocean Resources; Ocean Jurisdictions, Law of the Sea, and International Relations; and Areawide Planning and Management. Emphasis is placed on the economics of ocean space and on the role of science in governmental and industrial decision making. Other research interests are also appropriate.

Fellowships are awarded for one year with a stipend of \$24,000 plus group health insurance and a modest research budget. Recipients are encouraged to pursue their own research interests independently or in association with resident staff. Completed applications must be received by 15 January 1987 for 1987-88 awards. Awards will be announced in early March. Write for application forms to:

Dean of Graduate Studies
P.O. Box 5

Woods Hole Oceanographic Institution
Woods Hole, Massachusetts 02543

Equal Opportunity/Affirmative Action Institution

CONGRESSIONAL SCIENCE AND ENGINEERING FELLOWSHIPS

Applications Invited

The American Association for the Advancement of Science (AAAS) invites applications for two 1-year Congressional Science and Engineering Fellowships it will offer for the period beginning 1 September 1987. The Fellowship Program provides an opportunity for accomplished and societally aware postdoctoral to mid-career scientists and engineers to participate in and contribute to the public policy-making processes within the Congress for approximately 1 year. Fellows work as special legislative assistants within the congressional staff system.

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

The 1987-1988 AAAS Congressional Science and Engineering Fellows will receive a stipend of \$26,500; an additional \$1,500 is available for relocation expenses and travel in connection with the Program.

In order to obtain detailed information on the program and specific application requirements, write:

Congressional Science and Engineering Fellows Program
American Association for the Advancement of Science
1333 H Street, NW
Washington, D.C. 20005

The deadline for application is 15 January 1987. The award will be announced around 1 May 1987.

Toxicology Study Director

Thrive in Schering-Plough's research environment.

As senior toxicologist, you will assume a leadership role as Toxicology Study Director—conducting acute, sub-chronic and chronic toxicity studies in small and large animal species and supervise 4 support scientists.

To qualify, you should hold a PhD or DVM degree, with preferably 0-3 years in drug development toxicology. In addition, strong communication and supervisory skills are essential.

We offer competitive salary and benefits package. To explore this opportunity in our pathology/toxicology research unit in picturesque Sussex County, Northern New Jersey, please forward your resume to Mr. Louis DeMartino, Schering-Research, 60 Orange Street, Bloomfield, NJ 07003. We are an equal opportunity employer.



Schering-Plough

MANAGER R&D BUDGET AND POLICY PROJECT

The American Association for the Advancement of Science (AAAS) has an opening for a **project manager** to direct and conduct studies of federal R&D budgets and policies.

The project manager will (i) co-direct the planning, organization, and conduct of the AAAS R&D Budget and Policy Project, including preparation of reports on R&D in the federal budget and coordination of the activities of the Intersociety Working Group; (ii) develop and maintain close working relationships as AAAS representative with key officials, agencies, congressional staff and professional societies concerned with R&D budgets and policies and related areas of science and technology policy; and (iii) provide assistance to other AAAS staff in activities requiring information and expertise related to R&D policies and budgets, such as development and preparation of congressional testimony for AAAS officers, and provision of R&D policy updates to members, officers, committees and affiliates. Individual will serve as senior assistant to, and under the general direction of, the Head of the Office of Public Sector Programs in activities described above.

Position requires: A Ph.D. or equivalent experience in an area related to science and technology policy; three or more years of experience in policy, research or teaching related to science, engineering, and public policy with evidence of high achievement and potential; strong understanding of the functioning of the federal government in science and technology, and current major issues related thereto; ability to understand budgetary and legislative documents, and to analyze and present accurately and creatively the financial data they contain; ability to write accurately, objectively, clearly, and with style under deadline pressure; and the ability to develop constructive working relationships at a peer level with federal officials, AAAS Board and Committee members.

Please submit a letter of application, including salary requirements, and résumé to: **Ms. C. Bell, The American Association for the Advancement of Science, 1333 H Street, NW, Washington, DC 20005.**

Equal Opportunity Employer

Molecular Biologists

The Molecular and Cellular Biology Group at the Agricultural Research Center of American Cyanamid has openings for highly motivated individuals with research experience in molecular biology. At the Ph.D. level, there is a unique opportunity for an individual with demonstrated research ability in the area of eukaryotic gene expression. Candidates should have minimum 1-2 years post-doctoral training with broad experience in the techniques of gene analysis and expression.

At the B.S.-M.S. level, there are opportunities for individuals with 2-5 years experience in a productive academic or industrial laboratory. Experience in the basic techniques of molecular biology (c DNA cloning, synthetic oligonucleotides, DNA sequencing, expression vectors, etc.) is required. You will work with a Senior Research Scientist to develop and plan experiments, working on specific programs with considerable independence.

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, New Jersey 08540
An Equal Opportunity Employer M/F/H

DNAX Research Institute

Flow Cytometry Research Assistant

DNAX Research Institute, a biotechnology research facility near Stanford University, has a position immediately available for a research assistant to operate and maintain the Flow Cytometry Facility.

This individual will operate, maintain and provide training to others on the Fluorescence-Activated Cell Sorter (Becton-Dickinson FACS IV). Other duties include establishing new techniques for fluorescent staining and cell cycle analysis, preparing immunological reagents, and preparing cell samples for cell sorter. Candidates should have the interpersonal skills necessary for interacting with a variety of users.

Candidates should possess a BS or MS in biology, biochemistry, or allied sciences and a minimum of one year of experience in flow cytometry.

Interested applicants should send a curriculum vitae to DNAX Research Institute, Human Resources Department, 901 California Ave., Palo Alto, CA 94304. DNAX is an equal opportunity employer, m/f/h.

ANTICANCER DRUG DISCOVERY

Ph.D. Level

Recent developments have generated an opening in the cancer chemotherapy program at the Warner-Lambert/Parke-Davis Pharmaceutical Research Division. This position is located in Ann Arbor, Michigan at our modern facilities, which are located adjacent to the University of Michigan campus. We are devoted exclusively to new drug discovery and development.

The successful candidate will be responsible for the evaluation of the in vivo activity and toxicity of novel anticancer agents and radiosensitizers against transplantable murin tumors and human tumor xenografts, experimental support of lead compounds in clinical trials, and the development of new models for the prediction of clinical activity.

Candidates should have a Ph.D. in pharmacology, 1-5 years of postdoctoral training in experimental chemotherapy with emphasis on in vivo aspects, and training in biochemistry and cell biology. Experience in the areas of radiobiology, flow cytometry, and supervision of technical staff would be favorable.

Qualified candidates should send curriculum vitae in confidence to: Ms. R. Chapman, Supervisor, Human Resources, **Warner-Lambert/Parke-Davis**, 2800 Plymouth Road, Ann Arbor, MI 48105.

WARNER LAMBERT

"EQUAL OPPORTUNITY IN ACTION"

AUSTRALIA
CSIRO
RESEARCH FELLOW
A\$28,107-A\$34,681
DIVISION OF ENERGY TECHNOLOGY
HIGHETT, VIC

FIELD: Engineering Mathematics

GENERAL: The Division of Energy Technology undertakes engineering research directed towards the balanced use of Australia's energy resources. The Division has a total staff of 78 including 36 professional engineers and scientists, with 71 of the staff located at the Divisional Headquarters in Highett, Victoria.

Within a programme on natural gas utilization, research is being conducted at the Division to develop an understanding of aerodynamic processes in combusting gas flows, with the objective of improving the efficiency of utilization of this important energy resource. The Division has an established reputation in fluid mechanics and is developing capability in the study of reacting flows.

DUTIES: The appointee will initially undertake research into the mathematics of theories which describe aerodynamic structures in turbulent jet flows and the relevance of these theories to mixing, efficiency and noise generation during combustion.

QUALIFICATIONS: A PhD degree or equivalent in mathematics or engineering mathematics plus proven research ability. An interest in the fields of turbulence modelling and heat transfer is important, together with a strong background in applied mathematics and theoretical fluid mechanics. Familiarity with advanced numerical methods is essential.

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

APPLICATIONS: Stating relevant personal and professional details, the names of at least two professional referees and quoting reference number A3600 should be directed to:

The Chief
CSIRO Division of Energy Technology
PO Box 26
HIGHETT VIC 3190
AUSTRALIA

By 4 weeks from date of publication

CSIRO IS AN EQUAL OPPORTUNITY EMPLOYER

MANAGER
PHARMACEUTICAL REGULATORY
AFFAIRS

Experience required in Direct Management/Performance of pharmaceutical development activities, including significant comprehensive "Hands-on" responsibility for Drug Regulatory Affairs (INDs/NDAs). Experience with Army pharmaceutical development and/or an MD a plus.

We offer a comprehensive benefits package. Salary negotiable. Send resume and Salary history to:



20251 Century Boulevard
 Germantown, MD 20874

Attn: VW-8

EOE/M/F/H/V

RESEARCH AND
DEVELOPMENT
OPPORTUNITIES

Boehringer Mannheim is a rapidly growing leader in the field of Medical Diagnostics and Biochemicals. This leadership has been attained through emphasis on quality and team effort and it's Boehringer Mannheim's employees that are responsible for the growth and leadership.

Due to this growth, we are currently seeking qualified individuals for exceptional opportunities in the following areas:

RESEARCH INVESTIGATOR
—ANALYTICAL

Responsibilities include developing analytical procedures for characterization of reagents and raw materials with respect to their reactivity, specific activity and stability. Also will coordinate and conduct the development of analytical procedures to extract and quantitate the active constituents of test pads and films. A Ph.D. in Analytical Chemistry, Biochemistry or equivalent, knowledge of immunoreagents, the capability to perform test development and patent studies are required. Effective oral and written communication skills are essential. Experience with polymers would be a definite plus.

RESEARCH INVESTIGATOR
—TEST DEVELOPMENT

These positions will conduct and coordinate the development of immunological and clinical tests in novel formats from initial laboratory experiments to stable, precise and accurate tests ready for transfer to production. Requirements include a Ph.D. in Chemistry or related area and proven R&D experience in clinical chemistry or immunoassay development, preferably in an industrial environment.

RESEARCH INVESTIGATOR
—IMMUNOCHEMISTRY

Primary responsibilities will be to oversee and conduct the purification, characterization and refinement of polyclonal and monoclonal antibodies, and the purification and chemical derivation of other biological macromolecules. Solid know-how in organic and/or analytical chemistry is desirable. Must have a Ph.D. in Chemistry, Immunology or related area and several years of relevant work experience.

RESEARCH INVESTIGATOR
—CELL BIOLOGY

Will be responsible for overseeing and conducting the in vitro production and characterization of monoclonal antibodies and other cell products; developing products and analytical methods for tissue culture; and interfacing with related R&D activities in Molecular Biology and Immunodiagnostics. Requires a Ph.D. in Biochemistry, Immunology or related area, and R&D experience in antibody production and cell culture.

SCIENTISTS

These positions will support the above personnel with requirements including B.S. or M.S. in Biology, Chemistry, Biochemistry, Immunochemistry or Analytical Chemistry, and at least one year of applicable R&D experience.

At Boehringer Mannheim we offer an exciting and challenging work environment as well as an excellent compensation and benefit program including a 401K. If you meet the above requirements and would like to join an organization that is a leader in its field, we invite you to apply or send your resume with salary history to:

Human Resources
 Boehringer Mannheim
 P.O. Box 50100 — 9115 Hague Road
 Indianapolis, IN 46250

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POSITIONS OPEN

CELL BIOLOGIST

Department of Anatomy with modern research facilities at a state medical school campus seeks candidates for a tenure-track faculty position at the assistant or associate professor level. Candidates must have postdoctoral training and the capability to successfully compete for extramural research support. Preference will be given to individuals who utilize cellular and molecular approaches in biological investigations. The appointment emphasizes research and an academic background which will permit participation in team-taught departmental courses, as well as graduate courses. Salary level is very competitive and depends upon previous experience. For full consideration, candidates must respond by 15 January 1987 with curriculum vitae, a statement of past and future research direction, and the names and addresses of three references to: **Dr. N. S. Vasan, Chairman of Search Committee, Department of Anatomy, University of Medicine and Dentistry of New Jersey (UMDNJ)—New Jersey Medical School (NJMS), 185 South Orange Avenue, Newark, NJ 07103-2757.** Applications from women and minority candidates are encouraged. UMDNJ-NJMS is an Equal Opportunity/Affirmative Action Employer.

TENURE-TRACK POSITION IN CELL BIOLOGY. Section of Biochemistry, Molecular and Cell Biology, Cornell University. We seek applicants for a faculty position in cell biology (level to be determined by candidate's qualifications and experience). The successful candidate is expected to develop a vigorous research program and participate in the teaching of cell biology. The starting date could be as soon as September 1987. Please send curriculum vitae, a statement of previous and planned research, and arrange to have three letters of reference sent by 30 January 1987 to: **Dr. John Lis, Search Committee Chairman, Section of Biochemistry, Wing Hall, Cornell University, Ithaca, NY 14853.** Cornell University is an Equal Opportunity/Affirmative Action Employer.

DEPARTMENT OF PSYCHOLOGY— VANDERBILT UNIVERSITY

Active, collegial 22-member department seeks **CHAIR** (tenured professor). Applications from women and minority scholars especially invited. Candidates must have outstanding record of research productivity and demonstrated skill in providing leadership to the department as it (i) fills several positions over the next few years and (ii) builds and occupies a new building. The department has recently been reorganized and is entering a period of dynamic growth. Interested candidates should send curriculum vitae, selected reprints, names and addresses of at least three references, and a letter describing research interests to: **Chair, Search Committee, Department of Psychology, 134 Wesley Hall, Vanderbilt University, Nashville, TN 37240.** Vanderbilt is an Equal Opportunity/Affirmative Action Employer.

DIRECTOR OF COMPREHENSIVE CANCER CENTER

Duke University Medical Center is seeking applications for director of its Comprehensive Cancer Center. The director is responsible for planning and conducting programs associated with the oncological research activities conducted at Duke University and assists in the coordination of patient care rendered to cancer patients treated in Duke University Hospital and its clinics. Candidates should have demonstrated impressive achievement in administrative functions, a considerable scientific background with special interests in oncology or related areas of investigation, a proven commitment to excellence, and the ability to successfully promote the Cancer Center's development efforts. Candidates will be expected to have an M.D. or equivalent degree. Letters of application and a current curriculum vitae should be forwarded to: **Chairman of Director of Comprehensive Cancer Center Search Committee, Box 3701, Duke University Medical Center, Durham, NC 27710.** Duke University is an Affirmative Action/Equal Opportunity Employer.

DIRECTOR, ANIMAL DIAGNOSTIC LABORATORY, state of Colorado. Applicants and inquiries contact: **C. V. Kimberling, Colorado State University, Fort Collins, CO 80523.**

POSITIONS OPEN

CHAIRPERSON DEPARTMENT OF PHYSIOLOGY THE UNIVERSITY OF VIRGINIA MEDICAL CENTER

Applications are invited for the position of professor and chairperson of the Department of Physiology at the University of Virginia Medical Center. Candidates must have a distinguished record of scholarship and professional achievement, and proven leadership and administrative ability. A curriculum vitae and names and addresses of three references should be submitted by 1 December 1986 to the chairman of the Search Committee at the following address:

**Thomas W. Tillack, M.D., Chairman
Department of Pathology
University of Virginia Medical Center
Box 214
Charlottesville, VA 22908**

An Equal Opportunity/Affirmative Action Employer.

CHEMISTRY CHAIRMAN, THE UNIVERSITY OF TOLEDO. Applications and nominations for the position of chairman are invited from individuals in any area of chemistry. The appointee will sustain a record of proven excellence in teaching and research. This is an exciting opportunity for a skilled leader to shape the continuing growth and development of a superior department in a major urban state university. The department has been designated as a center of excellence both by the state and within the university and has received in excess of \$1,000,000 in major equipment additions over the past 2 years. Renovations and additions to teaching and research laboratories are planned and a search for two junior faculty members is in progress. The position may be filled as early as fall 1987. There is no search deadline, but applicants seeking early consideration are encouraged to submit as soon as possible curriculum vitae, a statement of research plans, and the names of at least three professional references to: **Professor Max O. Funk, Department of Chemistry, The University of Toledo, Toledo, OH 43606; telephone 419-537-4569.** The University of Toledo is an Affirmative Action/Equal Employment Opportunity Employer.

CHIEF, ENVIRONMENTAL CONTAMINANTS

The Texas Parks and Wildlife Department's Resource Protection Division is seeking a strong administrator with technical expertise in ecological toxicology, water quality, environmental sciences, or related fields. Applicants should hold an advanced degree (Ph.D. preferred) in one of these areas. Varied responsibilities include program administration and supervision of 15-member staff. Technical work in areas listed above offers publication opportunities. Applicants should have an understanding of, and experience with, state or federal environmental regulatory processes. Effective writing, management, and communication skills required. Annual salary: \$33,912, plus benefits. Location: Austin, TX. Send a complete résumé by 15 January 1987 to: **Leland E. Roberts, Texas Parks and Wildlife Department, 4200 Smith School Road, Austin, TX 78744.** Vacancy Announcement 2, item 9. *An Equal Opportunity/Affirmative Action Employer.*

CURATORIAL POSITION ICHTHYOLOGY

The American Museum of Natural History is seeking an individual for a tenure-track curatorial position in the Department of Ichthyology to conduct original research and to participate in its programs of exhibition and education. Qualified candidates must have a Ph.D. degree or its equivalent and a background in ichthyological research relevant to the museum's collection of 1.5 million specimens from throughout the world. Excellent benefits. Salary is negotiable. Starting date is 1 July 1987, or soon thereafter. Closing date for applications is 1 January 1987.

For consideration, send curriculum vitae, samples of publications, and names of three references to: **Mr. Lee Vilensky, Personnel Department, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024.** *An Equal Opportunity Employer.*

POSITIONS OPEN

CLINICAL RESEARCHER UNIVERSITY OF KANSAS SCHOOL OF PHARMACY

A 12-month, tenure-track pharmacy practice faculty primarily devoted to clinical research activities. Applicants are sought who have an established track record in obtaining funds, conducting, and publishing clinical research. Applicants should have clinical practice-teaching experience and possess a Pharm.D., M.S., or Ph.D. degree. To apply send curriculum vitae by 15 January to: **Sara J. White, Professor of Pharmacy, University of Kansas Medical Center, 39th and Rainbow, Kansas City, KS 66103.** *An Equal Opportunity/Affirmative Action Employer.*

OREGON STATE UNIVERSITY DEAN OF THE COLLEGE OF AGRICULTURAL SCIENCES

The dean of the College of Agricultural Sciences is the chief administrative officer for all units within the college and provides leadership for the college's administrative team of four associate deans and directors. Units within the college include academic programs, the agricultural experiment station, the extension service, and international programs. The dean reports to the vice president for academic affairs and provost.

The position qualifications include: an earned doctorate in an agricultural or related discipline, distinguished record of professional accomplishments, significant administrative experience, understanding of agricultural issues and the role of the land grant university, effective communication skills, ability to inspire others, and credentials for tenure in an academic unit.

The position, available 1 July 1987, is a full-time, 12-month appointment at the rank of professor. Salary will be commensurate with qualifications. The closing date for nominations is 6 January 1987 and the closing date for applications is 15 January 1987. Individuals wishing to apply should submit a letter of application, a current résumé, and the names, addresses, and telephone numbers of five references. Reference will not be contacted without further prior contact with the candidate.

Nominations and applications should be directed to: **Dr. Richard A. Scanlan, Chair, Search Committee for Dean of Agricultural Sciences, Office of Academic Affairs, Oregon State University, Corvallis, OR 97331-2128, Telephone: 503-754-3131 or 754-2111.**

Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973. Applications from women and minorities are encouraged.

DEPARTMENT CHAIRPERSON ENTOMOLOGY AND NEMATOLOGY

Administer large, diverse department with teaching research and extension. Thirty-three on campus faculty, 44 off-campus at research centers. Twenty undergraduate and 61 graduate students. Liaison with 56 adjunct U.S. Department of Agriculture and Florida Department of Agriculture faculty. Demonstrated leadership and achievement in research, teaching, and/or extension. Administrative and fiscal management experience required. Application deadline 2 February 1987. For information or to apply, contact: **Dr. John R. Strayer, 3125 McCarty Hall, University of Florida, Gainesville, FL 32611; telephone: 904-392-1901.**

DIRECTOR OF THE WAMI MEDICAL PROGRAM IN IDAHO Search Extended

The University of Idaho solicits nominations and applications for the position of director for Idaho's component of the WAMI (Washington, Alaska, Montana, Idaho) Regional Medical Education Program of the University of Washington School of Medicine. Position descriptions are available on requests made to the address below. Starting date is 1 July 1987. To apply please submit a letter of application, a résumé, and four original letters of reference by 1 December 1986, to: **Chair, WAMI Search Committee, College of Letters and Science, University of Idaho, Moscow, ID 83843.**

The University of Idaho is an Equal Opportunity/Affirmative Action Employer and Educational Institution.

WASHINGTON UNIVERSITY, ST. LOUIS

POSTDOCTORAL RESEARCH IN CLINICAL SCIENCES

The Department of Psychiatry of Washington University School of Medicine has several NIMH-funded postdoctoral research positions available in a wide range of scientific fields relevant to psychiatry. Research training is available in:

| | |
|--|--|
| genetic epidemiology and molecular genetics | (CR Cloninger, E Devor, D Gerhard, B Suarez, A Wright) |
| biomathematical modelling | (DC Rao, T Reich, J Rice) |
| epidemiology | (L Robins, F Earls, J Helzer) |
| classification and nosology | (E Robins, SB Guze) |
| neural basis of tactile sensation | (M Carlson) |
| neuroendocrinology | (TJ Cicero) |
| neurotransmitter and peptidergic systems | (B Hartman, P Faris, J Olney) |
| protein chemistry of the CNS | (B Moore) |
| experimental neuropathology and neurotoxicology | (J Olney, T Moore, C Zorumski) |
| lithium effects on phosphoinositides and phosphoinositide-linked receptors | (WR Sherman) |
| neuroimaging | (E Reiman) |
| biological correlates of child psychiatric disorders | (R Todd) |

Positions are available as part of an integrated departmental program for 1 to 3 years with either interdisciplinary or highly focused research and research training objectives. Applicants with M.D. or Ph.D. should send curriculum vitae, description of research and training goals, and three letters of recommendation to:

Dr. C. R. Cloninger
Department of Psychiatry
Washington University Medical Center
216 So. Kingshighway, St. Louis, MO 63110

Washington University is an Equal Opportunity/Affirmative Action Employer



The University
of
British Columbia

PLANT MOLECULAR GENETICIST

Subject to final budgetary approval, the Department of Botany at The University of British Columbia is currently seeking applicants for a tenure-track position in the area of plant molecular genetics. The candidate is expected to establish an active research programme in this area and to participate in the teaching of an undergraduate general genetics course and an upper level course in plant genetics. The position will be filled at the level of Assistant Professor.

Candidates for this position should have demonstrated expertise in recombinant DNA technology in plants and have postdoctoral experience. They should have a genuine interest in the broader aspects of plant biology and be able to instigate and encourage collaboration with a diverse group of colleagues within the Department of Botany.

Applicants should submit a Curriculum Vitae by **January 15th, 1987**, including a summary of future research plans, and arrange for three letters of reference to be sent to: **Dr. A.J.F. Griffiths, Search Committee Chairman, Department of Botany, The University of British Columbia, #3529-6270 University Boulevard, Vancouver, B.C. V6T 2B1.**

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

RESPIRATORY PHARMACOLOGY

BURROUGHS WELLCOME CO., an innovative pharmaceutical company located in the Research Triangle Park, NC, and having a top reputation for research has an immediate opening for a **Postdoctoral Fellow** in respiratory Pharmacology to conduct independent research to study the affects of reference and experimental anti-asthmatic agents on bronchoconstriction and airway hyperreactivity *in vivo*.

Requirements are a Ph.D. in Pharmacology/Physiology, with extensive experience in pulmonary function procedures *in vivo*.

BURROUGHS WELLCOME CO., offers a comprehensive company-paid benefit package, a competitive salary and an excellent environment in which to apply your professional capabilities. Qualified minority, female, veteran and handicapped individuals are encouraged to apply. Individuals should forward a curriculum vitae with transcripts to: **Employment Supervisor, Position # 1226, BURROUGHS WELLCOME CO., 3030 Cornwallis Road, Research Triangle Park, NC 27709.**

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Senior Research Investigator Squibb-Chemical Division

The Biological Process Development Department of E.R. Squibb & Sons in New Brunswick, New Jersey, has an opening for a Senior Research Investigator to participate in the biocatalytic group. The successful candidate will have had extensive experience in enzymatic bioconversions, preferably in the optical resolution area. Responsibilities: to discover and develop fermentation or enzymatic processes on laboratory scale to create new pharmaceutical compounds or intermediates used for chemical synthesis. The enzymatic processes include conversions of amino acids or their derivatives, optical resolutions of racemic mixtures and desymmetrization of prochiral molecules. Experience in enzyme identification, production (by fermentation) and immobilization is highly desirable. Ideally, applicants should have additional training in microbiological and fermentation techniques. Some supervisory experience would be helpful.

Qualifications must include a Ph.D. in Enzymology or Biochemistry with at least 5 years postdoctoral experience in this field.

We offer a competitive salary and an excellent benefits package. For confidential consideration, qualified applicants are invited to submit a resume, which must include salary history, to: **Dept. KA/E9486, E.R. Squibb & Sons, P.O. Box 191, New Brunswick, NJ 08903.** An equal opportunity employer



SQUIBB

Where science comes to life.

POSITIONS OPEN

ECOLOGIST to teach ecology, general biology, and population genetics-evolution. Ph.D., entry-level tenure-track position. Two-year initial appointment starting 1 July 1987. An effective balance of teaching and research encouraged and expected. Complete résumé, undergraduate and graduate transcripts, and three letters of reference must be received prior to 5 January by: **Professor Thomas Brennan, Biology Department, Dickinson College, Carlisle, PA 17013. An Affirmative Action/Equal Opportunity Employer.**

ELECTRICAL AND COMPUTER ENGINEERING CHAIRPERSON—The Electrical and Computer Engineering Department of the University of Miami invites applications from qualified candidates in the fields of electrical engineering, computer engineering, and computer sciences for the position of chairperson. Candidates should have an earned doctorate in one of the above fields, as well as teaching, industrial, or government experience; substantial record of externally funded research; and evidence of leadership ability. The department, which is the largest in the College of Engineering, has 18 full-time faculty, plus two open lines, with both undergraduate and graduate (M.S. and Ph.D.) programs. Applications with résumés and names of three references (with addresses) should be sent to: **Dr. T. Nejat Veziroglu, ECE Chair Search Committee, College of Engineering, P.O. Box 248294, Coral Gables, FL 33124; telephone 305-284-4666.** The application deadline is 20 January 1987. Starting date is no later than 15 August 1987. *The University of Miami is an Affirmative Action/Equal Opportunity Employer.*

TENURE-TRACK FACULTY POSITIONS—The Department of Microbiology of Jefferson Medical College, Thomas Jefferson University, is seeking to expand with the addition of faculty with interests in immunology and pathogenesis of disease. Preference will be given to candidates using modern genetic, biochemical, or immunological approaches to study problems in cellular immunology and microbial pathogenesis, especially in bacterial, fungal, and parasitic systems, although outstanding candidates from other disciplines will be considered. Applicants must have several years of postdoctoral training and evidence of productivity in research. The successful candidate will be expected to establish and maintain a strong research program and participate in the medical and graduate student teaching programs in the department. Please send curriculum vitae, a statement of research interests, and the names of at least three references, by 31 December 1986 to: **Dr. Calkins, Chairman, Search Committee, Department of Microbiology, Room 364, Jefferson Alumni Hall, THOMAS JEFFERSON UNIVERSITY, Philadelphia, PA 19107. Thomas Jefferson University is an Equal Opportunity/Affirmative Action Employer.**

FACULTY POSITIONS

Two tenure-track positions available August 1987. Rank and salary commensurate with qualifications and experience. A **MICROBIAL MOLECULAR GENETICIST** and a **VIROLOGIST** sought to establish graduate research and teaching programs in respective subject areas. Responsibilities also include undergraduate teaching. Forward curriculum vitae, reprints, transcripts, statement of research goals, and three letters of recommendation to: **Dr. G. Alex Marsh, Chairman, Department of Biological Sciences, Florida Atlantic University (FAU), Boca Raton, FL 33431.** Deadline 15 February 1987. *FAU is an Affirmative Action/Equal Opportunity Institution.*

UNIVERSITY OF MARYLAND, COLLEGE PARK

Applicants are invited for a joint faculty position (tenure or tenure-track) in the Institute for Physical Science and Technology and the Chemistry Department. Candidates at all ranks will be considered. The candidate should have demonstrated the ability to establish a strong research program in the area of chemical physics, either theoretical or experimental. Letters of application, along with curriculum vitae, list of publications, and the names and addresses of three references should be sent to: **Director, Institute for Physical Science and Technology, University of Maryland, College Park, MD 20742.**

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

POSITIONS OPEN

GEORGIA SOUTHWESTERN COLLEGE BIOLOGY

The Department of Biology, Georgia Southwestern College, invites applications for a tenure-track position to begin September 1987. A Ph.D. is preferred. Teaching duties will include entry-level biology; introductory human anatomy and physiology; and some upper-level biology courses. Expertise in an area of vertebrate biology, such as ichthyology, herpetology, ornithology, or mammalogy, is desirable. Although this is primarily a teaching position, research interest is encouraged. Salary and rank commensurate with education and experience. Applicants should submit curriculum vitae, a statement of professional goals, and names, addresses, and telephone numbers of at least three references by 15 January 1987 to: **Dr. William L. Tietjen, Chairman, Department of Biology, Georgia Southwestern College, Americus, GA 31709. Telephone: 912-928-1250.**

Georgia Southwestern College is an Affirmative Action/Equal Opportunity Employer and a Senior Unit of The University System of Georgia.

The University of North Carolina at Chapel Hill invites applications for a junior or senior **FACULTY POSITION** in the Department of Anatomy and Laboratories for Cell Biology. Applicants should have postdoctoral research experience and demonstrated excellence in any area of cell biology. Preference will be given to research in molecular biology since the candidate will be expected to carry out an active research program in molecular biology. Teaching opportunities will be in medical histology, human gross anatomy, developmental biology, neurobiology, or cell biology. *Women and minorities are encouraged to voluntarily identify themselves.* Send curriculum vitae, a brief description of research plans, and the names of three references by 1 February 1987 to: **Dr. Charles R. Hackenbrock, Chairman, Department of Anatomy, School of Medicine, 108 Swing Building, 217H, University of North Carolina at Chapel Hill, Chapel Hill, NC 27514. An Equal Opportunity/Affirmative Action Employer.**

JUNIOR FACULTY POSITION IN DYNAMICAL OCEANOGRAPHY DIVISION OF APPLIED SCIENCES HARVARD UNIVERSITY

Teaching and research activities may span physical oceanography, computational, and geophysical fluid dynamics. Opportunities exist for independent and innovative research in collaboration with scientists developing novel methodology in synoptic dynamical oceanography involving the interaction of data assimilation and ocean modeling.

Applicants preferably should be 1 to 5 years from receipt of the Ph.D. degree. By 31 December 1986, each applicant should submit a résumé to: **Dynamical Oceanography Search Committee, c/o Dean Paul C. Martin, Pierce Hall 217, Harvard University, Cambridge, MA 02138.** The résumé should include curriculum vitae, bibliography, statement of research interests and the name, address, and telephone number of three referees willing to provide letters of recommendation. *Applications from women and minority group members are especially encouraged. Harvard University is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITIONS. Medical School Department of Microbiology and Immunology invites applications for tenure-track positions at assistant or associate professor levels. Applicants must hold a Ph.D. or equivalent degree and have at least 2 years of productive postdoctoral research experience in the areas of cellular and molecular immunology or molecular genetic systems in pathogenic microorganisms. Associate professor candidates must have an established, well-funded research program. Successful candidates will be expected to develop/maintain vigorous, grant-supported research programs, and participate in the training of medical, and graduate students and postdoctorals. Teaching in medical and graduate courses is required. Salaries and research start-up support are nationally competitive. Submit curriculum vitae, description of research interests, and names of three references by 15 January 1987 to: **Dr. Paul V. Phibbs, Chairman, Department of Microbiology and Immunology, School of Medicine, East Carolina University, Greenville, NC 27858-4354. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

THE UNIVERSITY OF IOWA

FACULTY POSITION IN BIOCHEMISTRY—The department invites applications and nominations for a tenure-track position at the level of assistant professor. Applicants must hold a doctoral degree, and preferably should have postdoctoral experience. Applicants with expertise in any area of biochemistry or closely related disciplines will be considered; however, we are especially interested in applicants with expertise in regulation of eukaryotic gene expression. Responsibilities will include the development of a vigorous, independent program of scholarly research and participation in the department's teaching programs for undergraduate, graduate, and professional students. Women and minority candidates are especially encouraged to apply. Applicants should send curriculum vitae, including a list of publications and summary of future research plans, and arrange to have three letters of reference sent to: **Dr. Peter Rubenstein, Chairman, Faculty Search Committee, Department of Biochemistry, College of Medicine, University of Iowa, Iowa City, IA 52242.** Formal screening of candidates will begin 1 January 1987. *The University of Iowa is an Equal Opportunity and Affirmative Action Employer.*

FACULTY POSITION: Tenure-track for fall 1987. Rank and salary dependent upon qualifications. Ph.D. in physical chemistry with strong background in instrumental analysis. Excellence in teaching is emphasized and research encouraged. Evidence of such teaching must be submitted and also included in the three required letters of reference. Send complete curriculum vitae including transcripts and letters of reference to: **Dr. C. Hickey-Williams, Chairperson, Department of Chemistry, Western Connecticut State University, Danbury, CT 06810.** Closing date is 31 December 1986. *An Equal Opportunity/Affirmative Action Employer.*

UNIVERSITY OF WISCONSIN-MADISON SCHOOL OF VETERINARY MEDICINE

The Department of Pathobiological Sciences invites applications for **TWO FACULTY POSITIONS:** (i) **Experimental Pathologist** and (ii) **Veterinary Parasitologist.** Faculty are expected to have active, productive research programs, participate in the teaching and training of graduate and professional students, and cooperate in clinical services. Rank and salary commensurate with experience and qualifications. Send letter of application, curriculum vitae, and names of three references to: **Ronald D. Schultz, Chairman, Department of Pathological Science, School of Veterinary Medicine, University of Wisconsin-Madison, Madison, WI 53706; telephone: 608-263-9888. An Equal Opportunity/Affirmative Action Employer.**

Reed College has a **tenure-track position** open in **PHYSICAL CHEMISTRY** as of August 1987. The successful candidate must hold the Ph.D. degree, have a demonstrated commitment to excellence in teaching, and be prepared to teach courses which include the following: quantum mechanics, statistical mechanics and thermodynamics, chemical instrumentation, and advanced physical chemistry laboratory. The candidate will also be expected to teach in part of the freshman chemistry course, and to be involved in an active research program, part or all of which should be suitable for participation by seniors in their required thesis course.

Completed applications, consisting of curriculum vitae, transcripts of undergraduate and graduate education, and three letters of recommendation arranged for by the candidate should be sent to: **Professor John Hancock, Chairman, Chemistry Search Committee, Reed College, Portland, OR 97202,** before 12 January 1987. *Reed College is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION—New England Academic Medical Center is seeking an individual to assume a leadership role in neurosurgery. Candidates should have evidence of significant research commitment and funding ability, as well as administrative talents and clinical credentials. Applicants should be Board-certified. Send letter of application and curriculum vitae and bibliography to: **Box 206, SCIENCE. Minority and female candidates are encouraged to apply. Equal Opportunity Employer.**

Research Scientist

Growing biopharmaceutical firm located in suburban Philadelphia seeking aggressive immunologist eager to develop novel *in vitro* and animal model systems to test new immunotherapy agents. Ph.D. in immunology or biochemistry with strong record of research accomplishments in the area of cellular or molecular immunology required. Reply to:

**Dr. Peter Daddona, Director
Development & Applied
Sciences
Centocor, Inc.
244 Great Valley Parkway
Malvern, PA 19355**



An Equal Opportunity Employer

POSTDOCTORAL FELLOW Neurobiology

The Wellcome Research Laboratories located in Research Triangle Park, North Carolina, has a Postdoctoral Fellow position available in the Department of Medicinal Biochemistry. The grant for this position will be administered through the Department of Pharmacology at Duke University.

The position involves multidisciplinary approaches to study the mechanism of neurotransmitter/hormone synthesis and secretion. The candidate will be mostly concerned with the coordinated regulation of neuropeptide synthesis and processing and stimulus-secretion coupling using the adrenomedullary chromaffin cells in culture as a model system. Experience in biochemistry and protein chemistry is preferred.

To apply, forward curriculum vitae to:

**Dr. Emanuel Diliberto
Medicinal Biochemistry Department**

BURROUGHS WELLCOME CO.

An Equal Opportunity
Employer M/F



3030 Cornwallis Road
Research Triangle Park,
NC 27709

Wellcome

CARDIOVASCULAR PHARMACOLOGY

Ph.D. Level

The Wellcome Research Laboratories of BURROUGHS WELLCOME CO., located in Research Triangle Park, North Carolina, has immediate opportunities available in the following areas of cardiovascular pharmacology:

CARDIOVASCULAR/AUTONOMIC PHARMACOLOGIST (#1674)

Senior Scientist requiring extensive experience and interest in the area of cardiovascular/autonomic pharmacology. Position requires a Ph.D. or equivalent in pharmacology or physiology with postdoctoral training and minimum two years pharmaceutical experience in cardiovascular/autonomic pharmacology. Extensive experience in the area of myocardial contractility is required, along with the ability to provide expertise in the field and assume leadership of ongoing cardiotonic program. A broad knowledge of cardiovascular physiology, biochemistry and interest in receptor function is needed.

AUTONOMIC PHARMACOLOGIST (#1673)

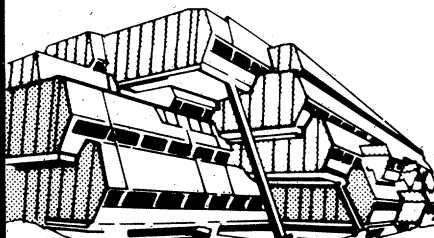
Senior Scientist level position for an individual with interest in smooth muscle and gastrointestinal pharmacology. Requirements are a Ph.D. or equivalent in pharmacology or physiology with postdoctoral training and minimum two years pharmaceutical experience in autonomic pharmacology. Extensive experience in the area of smooth muscle pharmacology and gastrointestinal disorders is required, along with the ability to provide expertise in the field and assume leadership of the ongoing autonomic program. An interest in receptor function and classification is needed.

CARDIOVASCULAR PHARMACOLOGIST (#1672)

Senior Scientist level requiring extensive experience and interest in the area of myocardial infarction and ischemia. Position requires a Ph.D. or equivalent in pharmacology or physiology with postdoctoral training and minimum two years pharmaceutical experience in cardiovascular pharmacology. Must be able to provide expertise in the field and assume leadership of ongoing studies of myocardial infarction and ischemia. A broad knowledge of cardiac, coronary and cardiovascular physiology and biochemistry is needed.

Each of the three positions listed also require that the candidate have a demonstrated ability to carry out an independent research program, to work in an integrated, diverse cardiovascular program, and to communicate scientific work orally and in writing. Experience with the generation of preclinical summary documents for IND's/NDA's for submission to the FDA would be helpful.

At BURROUGHS WELLCOME CO., you will enjoy a competitive starting salary, a comprehensive company-paid benefits plan, and the unique advantage of the Research Triangle Park area. Near several major universities and medical schools plus exciting cultural and leisure pursuits, our part of the South offers a very satisfying lifestyle. If you qualify for one of the positions listed above and are interested in a career in a state-of-the-art research environment, send your curriculum vitae and transcripts, **indicating position number, to: Employment Supervisor, BURROUGHS WELLCOME CO., 3030 Cornwallis Road, Research Triangle Park, NC 27709.**



**BURROUGHS
WELLCOME CO.**

An Equal Opportunity/
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Wellcome

We encourage qualified Minority, Female, Veteran and Handicapped individuals to apply.

POSITIONS OPEN

Department of Anatomy: The Department of Anatomy at the University of Mississippi Medical Center invites applications for one tenure-track **FACULTY POSITION**. Rank and salary are open based on previous experience. Individuals with expertise in cell biology, immunocytochemistry, or neuroscience are encouraged to apply. Teaching responsibilities will be in gross anatomy. The successful candidate should have (i) teaching experience, (ii) publications, and (iii) a significant potential for, or a proven record of, extramural funding. The department is well-equipped and there is excellent administrative support for basic sciences. Submit curriculum vitae, a letter of introduction, and have three letters of reference sent to: **Dr. D. E. Haines, Professor and Chairman, Department of Anatomy, The University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216-4505.** The deadline for receipt of applications is 1 January 1987.
Equal Opportunity Employer, M/F/H/V.

PLANT MOLECULAR BIOLOGIST

The Department of Biology of the University of California, San Diego (UCSD) is expanding its commitment to plant biology and invites applications for **TENURE-TRACK POSITION(S)** in plant molecular biology. Position at the assistant, associate, or full professor level is presently available. A second position, at the assistant professor level, is expected to become available shortly. Salary will be commensurate with level of appointment and based on UC salary scale.

The successful candidate(s) are expected to develop (untenured appointment) or continue (tenured appointment) a vigorous research program in plant molecular biology and participate in undergraduate and graduate-level teaching. Ph.D. degree required.

Please submit curriculum vitae, a statement of professional goals and research interests, and names of three referees by 20 December 1986 to: **C. Garnett, Plant Molecular Biology Search Committee, Department of Biology B-022, UCSD, La Jolla, CA 92093.**

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

FACULTY POSITIONS IN NEUROBIOLOGY-PHYSIOLOGY

Department of Biological Sciences, Purdue University, invites applications for two tenure-track faculty appointments in the general area of **neurobiology** or **animal physiology**. Candidates in any of the following areas of specialty are invited to apply: reconstituted membrane, membrane biophysics (peripheral and central), electrophysiology, visual physiology, developmental or genetic neurobiology, immunoneurobiology, neuroendocrinology, or neuropharmacology. Those who are working at the cellular or molecular level using modern techniques are especially welcome. Although we are seeking primarily junior scientists at the assistant professor level, we will consider appointments at senior levels for candidates with outstanding credentials. Candidates must have a strong research record and are expected to develop a vigorous research program and to engage in teaching physiology or neurobiology. For consideration, send curriculum vitae, list of publications, a statement of research interests, and the names of at least three references to: **Dr. William L. Pak, Convener, Neurobiology and Animal Physiology Search Committee, Department of Biological Sciences, Purdue University, West Lafayette, IN 47907,** by 15 December 1986.

An Equal Opportunity/Affirmative Action Employer

The Research School of Chemistry of the Australian National University invites applications for two **tenured staff positions: FELLOW/SENIOR FELLOW** in theoretical chemistry and **FELLOW** in organic chemistry. The research areas can encompass any appropriate area of chemistry or chemical physics. Appointment for 5 years initially; reappointment to retiring age subject to satisfactory review. Salary ranges: fellow A\$32,477 to A\$43,510 per annum, senior fellow A\$43,568 to A\$50,782 per annum. Reasonable travel expenses. Assistance with housing. Superannuation. Closing date 30 January 1987. Further information from: **The Registrar, The Australian National University, GPO Box 4, Canberra ACT 2601, Australia.** *The university is an Equal Opportunity Employer.*

POSITIONS OPEN

FACULTY POSITION BIOLOGY

The Biology Department of Seattle University is seeking applications for a full-time, tenure-track position at the assistant professor level beginning in September 1987. Seattle University is a metropolitan, Jesuit, teaching university located in Seattle, WA, serving approximately 3,500 undergraduate and 1,000 graduate students. Our department consists of five full-time faculty members, and has a strong general biology focus. We are looking for an individual with a Ph.D. in a biological science with emphasis in microbiology, proven teaching ability or potential, and a strong commitment to undergraduate education. The teaching focus will include undergraduate courses in microbiology and general biology. The other courses to be included in the teaching responsibilities, such as animal physiology, comparative vertebrate anatomy, parasitology, and biology of human sexuality, will be determined according to departmental needs and individual expertise.

Application, including résumé, transcripts, and list of references should be sent by 31 January 1987 to:

**Dr. David C. Brubaker, Chairperson
Department of Biology
Seattle University
Seattle, WA 98122
Telephone: 206-626-5620**

Seattle University is an Equal Opportunity/Affirmative Action Employer.

The Neurobiology Division in the Department of Anatomy and Cell Biology has a tenure-track **FACULTY POSITION** available at the rank of assistant or associate professor to be filled by an individual with a strong commitment to research using contemporary approaches to any aspect of functional brain organization. Send curriculum vitae, names of references, and a statement of research plans to: **R. M. Beckstead, Department of Anatomy and Cell Biology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425.**

GENETICISTS—Applications are invited for highly qualified individuals for two positions. Successful candidates will be expected to maintain vigorous research programs and to participate in the teaching of introductory and/or advanced courses in genetics. The positions are likely to be filled at the level of assistant professor, but appointment at any rank is possible. Screening will begin during December 1986; applications will be considered until each position is filled.

Position 1. Postdoctoral experience is strongly preferred. Research should be in either (i) **developmental genetics:** Emphasis on biochemical or molecular biological aspects of development is required; or (ii) **evolutionary genetics:** All areas of experimental evolutionary genetics will be considered, including biochemical, molecular, organismal, or population.

Position 2. Open to any **molecular biologist** whose research is focused on a question of fundamental interest to geneticists. Candidates should have demonstrated expertise in modern molecular genetic techniques and at least a year of postdoctoral experience.

Please send curriculum vitae, including description of future research plans, and have three letters of recommendation sent to: **Genetics Search Committee, Department of Biology, University of Iowa, Iowa City, IA 52242.** *The University of Iowa is an Affirmative Action/Equal Opportunity Employer.*

HEALTH POLICY RESEARCH

Positions are available in the **Health Program, Office of Technology Assessment (OTA), U.S. Congress, Washington, DC.** New studies in areas of national health policy—including indicators of quality of medical care, screening with mammography, and methods of evaluating medical therapies—require analysts skilled in research methods, critical literature review, and writing. Applicants should have a master's degree or Ph.D. in a related field, such as epidemiology, statistics, psychology, public health, or public policy. Relevant experience is desirable. Send curriculum vitae and writing sample to: **Denise DeSanctis, OTA, U.S. Congress, Washington, DC 20510-8025 by COB 5 December 1986.** *Equal Opportunity Employer.*

POSITIONS OPEN

BROCK UNIVERSITY DEPARTMENT OF BIOLOGICAL SCIENCES

A tenure-stream position for a **GENETICIST** is available from 1 July 1987. The appointee will be expected to teach molecular, transmission, and population genetics at the undergraduate level, to develop a strong research program in the area of his/her expertise, to supervise graduate students, and to interact with other faculty working at several different levels of biological organization. Salary and rank will be commensurate with qualifications; senior appointment is possible for an appropriate candidate. All qualified individuals are encouraged to apply, but preference will be given to Canadian citizens and permanent residents. Applicants should submit a complete curriculum vitae by 31 December 1986, together with a statement of research and teaching experience, reprints of published research, and the names of three referees to: **Chairman, Genetics Search Committee, Department of Biological Sciences, Brock University, St. Catharines, Ontario, Canada L2S 3A1.**

HEAD, DEPARTMENT OF BIOCHEMISTRY

North Carolina State University seeks an outstanding leader for its teaching and research programs in the Department of Biochemistry. In addition to administering the department, the head will be expected to conduct a personal research program related to plant, animal, or microbial biochemistry. Candidates should possess an established reputation in biochemistry, a Ph.D., and academic experience in teaching and research. Administrative experience or demonstrated leadership potential preferred. Write for a complete job description or apply by sending letter of interest, curriculum vitae, and names and addresses of three references by 30 January 1987 to: **Dr. R. J. Kuhr, Chairman, Biochemistry Search Committee, Box 7613, North Carolina State University, Raleigh NC 27695-7613.** *North Carolina State University is an Equal Opportunity/Affirmative Action Employer.*

University of California, Los Angeles—(UCLA) School of Medicine, UCLA Medical Center Department of Pediatrics invites applications for the position of **HEAD, DIVISION OF ENDOCRINOLOGY.** Depending upon qualifications, the level of the appointment may be at the associate professor or professor rank. Applicants must be Board-certified in pediatrics, and pediatric endocrinology. The successful candidate must have a strong background in, and commitment to, laboratory and clinical research, as well as excellence in clinical activities and teaching. Interested applicants should forward curriculum vitae to: **Robert C. Seeger, M.D., Professor and Vice-Chairman for Academic Affairs, Department of Pediatrics, UCLA Medical Center, Los Angeles, CA 90024.** *UCLA is an Affirmative Action/Equal Opportunity Employer.*

IMMUNOLOGIST/GENETICIST: Small, newly established company engaged in biomedical laboratory services and manufacture of diagnostic reagents is seeking a Ph.D. with training in genetics and immunology to guide laboratory operations, review and approve test results, and direct R&D activities. Consultation readily available from internationally recognized scientists affiliated with company. Midwest location. Competitive salary and opportunity to share in future growth of company. *An Equal Opportunity Employer.* Send curriculum vitae and other information to: **Box 209, SCIENCE.**

LABORATORY DIRECTOR to assign duties and organize laboratory for chemical and microbial analyses of food, feed, and fermented products, including analyses of protein, lipid, carbohydrate, fiber, mineral, amino acids, fatty acids, trypsin inhibitor, aflatoxin, lactic acid, and acetic acid; operate equipment and apply expertise in processing technology for research and development of lactic acid bacteria products for commercial use, including computer analyses of data. Requires M.S. in food science or animal nutrition and 3 years of experience in laboratory research in food science or animal nutrition. Must have "hands-on" experience with aseptic steam-jacketed pressure vessel, automatic fermentation equipment, continuous high speed separator, lyophilizer, and cryogenic equipment. Salary: \$24,000 per annum. Send résumé to: **Job Service of Iowa, 150 Des Moines Street, Des Moines, IA 50309.** Number 1622613.

NATIONAL SCIENCE FOUNDATION

NSF's Division of Biotic Systems and Resources is seeking qualified applicants for the following positions: **Program Director, Ecology Program; Program Director, Systematic Biology Program; and Associate Program Director, Systematic Biology Program.** The incumbents to these positions will administer a program for basic research grant support, including advising applicants, reviewing proposals, and other administrative duties. The positions are in the excepted service and will be filled on rotational or temporary basis. Salary for the temporary positions will be at NSF's GG/GH-14/15 level (equivalent to the GS schedule). The salary range for the rotator positions will be: *Associate Program Director*—\$40,000–\$60,000; *Program Director*—\$45,000 to \$70,000 (currently limited by statute to \$68,700).

The rotator candidate receives a leave of absence from his/her employer and salary is set in accordance with NSF's Circular No. 167, Rotator Program.

Applicants should have a Ph.D. and/or equivalent research experience. In addition, 4 to 6 years of successful research experience is required for the associate program director position, and for the program director position, 6 to 8 years of successful scientific research beyond the Ph.D. is required. Applicants should submit a Standard Form 171, Application for Federal Employment, or resume to the **National Science Foundation, Room 208, 1800 G St. NW, Washington, DC 20550. Atten: Catherine Handle. For further information call 202/357-7840. Hearing impaired individuals should call 202/357-7492.** NSF is an Equal Opportunity Employer.

HEAD, MICROBIOLOGY AND IMMUNOLOGY UNIVERSITY OF ARIZONA

Nominations and applications are invited for the position of Head of the Department of Microbiology and Immunology at the University of Arizona. This University Department offers undergraduate and graduate degree programs and maintains research and teaching activities on both the main campus of the University and in the College of Medicine. The Head will be responsible for developing strong educational and research programs, and for recruitment of many additional faculty to meet the new and expanded responsibilities of this well funded department.

The University is committed to supporting a Department responsible for research and education in the areas of immunology, virology, parasitology, microbial physiology and ecology, and bacterial pathogenesis. While all candidates with such research interests will be considered, the University is especially interested in candidates with demonstrated expertise and distinction in immunology. A broadly interested, knowledgeable scientist-leader capable of building, unifying, and inspiring research and educational programs based in the Colleges of Medicine, Agriculture, and Arts and Sciences is sought.

Candidates should have the Ph.D. and/or M.D. degree, or equivalent, a distinguished record of scholarship and research, and the ability to administer quality educational programs for undergraduate, graduate, and medical students. In addition, candidates should be prepared to foster the academic careers of individuals within the Department and to encourage interdepartmental collaboration in research and teaching.

Although the applications and nominations will be accepted until the position is filled, the Committee has established a deadline of 1 January 1987 to begin reviewing materials. Applications should include a complete Curriculum Vitae with a list of publications, as well as the names, addresses, and telephone numbers of at least three references. Address all correspondence to: **Dr. John G. Hildebrand, Chairman Microbiology and Immunology Search Committee, c/o Office of the Vice Dean, College of Medicine, University of Arizona, 1809 E. Mabel Street, Tucson, Arizona 85724.** Equal Opportunity/Affirmative Action Employer.

MINISTRY FOR THE ARTS – VICTORIA – AUSTRALIA MUSEUM OF VICTORIA

DEPUTY DIRECTOR, SCIENCE & TECHNOLOGY

Salary negotiable up to \$51,629 p.a.

The Ministry for the Arts is seeking applications from suitably qualified and motivated men and women for the Senior Executive position of –

Deputy Director, Science & Technology

The Museum of Victoria is the state's major repository for heritage collections which are unique both in their scope and value.

To better realise its community service role in education and in establishing itself as a major contributor to Victoria's further cultural and economic development, the Museum is embarking upon a new and exciting change of direction aimed at facilitating and stimulating public access and involvement through dynamic and varied exhibition programmes. Concurrent with these new developments, there is the need to maintain the high standards of curation and research activity central to the preservation, use and enhancement of the unique state collections.

The Challenge

The Museum's Science & Technology Division incorporates State Collections covering all facets of Man's technological activities. A major new area of emphasis concerns the integration of the Division's activities within the Museum's planned new multi campus development. The successful applicant will have the opportunity to make a significant contribution towards implementation of this new development and will be an innovative thinker capable of formulating the necessary policies to achieve this goal. The Deputy Director will be responsible for managing the development and ongoing operation of the Science & Technology Division to ensure the maintenance of effective and efficient curatorial and research practices and the provision of reliable information and expert advice at all levels.

The Successful Person Should Have

- A record of leadership, innovation and achievement at a senior level.
- Demonstrated high level ability to develop, research, maintain and expand public interest and awareness of the Museum's collection in science and technology.
- Ability to develop appropriate strategies for and oversee the establishment and successful implementation of the Museum's multi campus facilities.
- Demonstrated high level communication skills and the ability to represent the Museum in scientific and other forums.
- Significant experience in policy development and analysis preferably in the fields of science and technology.
- Appropriate tertiary qualifications and the ability to provide leadership in the co-ordination of the division's research activities.
- Demonstrated ability to operate as an effective member of a senior management team.

Conditions of employment are consistent with those in the Victorian Public Service. Salary will be negotiated up to \$51,692 p.a. Expense of office allowance of \$2,366 p.a. is also payable. Partial reimbursement of relocation expense is negotiable.

Further information may be obtained from Mr R. Edwards on (03) 669 9800, Melbourne, Australia.

Applications from men or women should be forwarded to the Personnel Manager, Ministry for the Arts, 168 Exhibition Street, Melbourne, Australia, 3000 by 10 December, 1986.

POSITIONS OPEN

MEDICINAL CHEMISTRY, Assistant Professor. The College of Pharmacy invites applications for a 12-month, tenure-track faculty position beginning 16 September 1987. Applicants should have the ability and desire to teach undergraduate medicinal chemistry. The successful candidate will be expected to establish an independent research program capable of attracting graduate students and extramural funding. Research emphases should include or be related to synthetic medicinal chemistry, natural products chemistry, bioorganic chemistry, computational chemistry, SAR approaches to receptor mechanisms, or drug metabolism. A Ph.D. degree is required. Preference will be given to candidates with postdoctoral or equivalent experience. Interested candidates should submit a letter outlining their research and teaching interests, curriculum vitae, and the names and addresses of three references by 31 January 1987 to: **Dean R. A. Ohvall, College of Pharmacy, Oregon State University, Corvallis, OR 97331-3507.** Oregon State University is an Equal Opportunity/Affirmative Action Employer and complies with Section 504 of the Rehabilitation Act of 1973.

UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY (UMDNJ) SCHOOL OF OSTEOPATHIC MEDICINE (SOM)

MICROBIOLOGIST: SOM has recently received approval for a unified 4-year campus in Stratford, NJ (approximately 15 miles from Philadelphia), and has extended its search for a microbiologist (specialized field of interest open). Applicants for assistant professor should have postdoctoral training and be capable of developing an independent research program. Applicants for associate professor or professor should have a record of productivity and research support. Submit application by 1 February 1987, accompanied by curriculum vitae, selected reprints, and names of three or more references to: **Dr. Robert Rhoades, Chair of the Search Committee, University of Medicine and Dentistry of New Jersey-SOM, Department of Anatomy, 675 Hoes Lane, Piscataway, NJ 08854-5635; telephone: 201-463-4334.** UMDNJ is an Affirmative Action/Equal Opportunity Employer.

MOLECULAR BIOLOGIST: A research position will be available 1 January 1987 to study the regulation of gene expression during spermatogenesis. Candidates with postdoctoral experience will be considered for a research assistant professorship. Individuals having less experience will be considered for a postdoctoral appointment. Please send curriculum vitae to:

Norman B. Hecht, Ph.D.
Department of Biology
Tufts University
Medford, MA 02155

MOLECULAR BIOLOGIST OLIGONUCLEOTIDE SYNTHESIS CHEMIST

Department of Microbiology, Georgetown University Medical Center is seeking a M.Sc./Ph.D. scientist with research experience in oligonucleotide synthesis and DNA sequencing for an ongoing research project on HIV. The nontenured-track appointment is at the research associate level at the Department of Microbiology. Georgetown University is an Equal Opportunity/Affirmative Action Employer.

Send curriculum vitae and names of three references to:

Dr. John L. Gerin
Division of Molecular Virology and Immunology
Department of Microbiology
Georgetown University Medical Center
5640 Fishers Lane
Rockville, MD 20852

MOLECULAR ENDOCRINOLOGIST—ASSISTANT/ASSOCIATE PROFESSOR. Active, well-funded Division of Endocrinology seeks additional M.D./Ph.D. faculty member with experience in the area of cellular/molecular biology of isolated endocrine cells. Preference for thyroid/reproduction-related program. Send curriculum vitae to: **Dr. Terry F. Davies, Annenberg, 23-70, THE MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, NY 10029.** An Equal Opportunity Employer.

POSITIONS OPEN

MOLECULAR BIOLOGIST

The Laboratory of Molecular Endocrinology at the Massachusetts General Hospital seeks a research associate to work on the regulation of polypeptide hormone genes. Experience in recombinant DNA techniques is preferable, but not essential. The laboratory is focused on studies of the *cis* and *trans* factors that lend cell-specific expression to polypeptide hormone genes. A microchemical facility for protein sequencing-synthesis and DNA synthesis is available. Salary and rank are commensurate with experience. Send curriculum vitae and two letters of recommendation to: **J. Habener, Chief, Laboratory of Molecular Endocrinology, Massachusetts General Hospital, Boston, MA 02114.**

MOLECULAR DEVELOPMENTAL BIOLOGIST IOWA STATE UNIVERSITY (ISU)

Iowa State University invites applications for a tenured or tenure-track faculty position. We are seeking a developmental biologist using state-of-the-art molecular approaches to study the regulation of gene expression in a developing eukaryotic organism. This position is part of a multimillion dollar, campus-wide effort to emphasize research in molecular biology and biotechnology. It is one of at least 12 molecular biology positions at ISU to be filled in the next 2 years. Modern nucleic acid, protein, and cell sorting facilities with the most advanced equipment available have recently been established. Salary will be negotiable and generous research start-up funds will be available. Modest teaching responsibilities will involve graduate (and advanced undergraduate) courses in molecular developmental biology. Send a description of research interests, curriculum vitae, and a list of three references by 20 January 1987 to: **Dr. Richard Hallberg, Department of Zoology, 339 Science II, Iowa State University, Ames, IA 50011.**

NEUROCHEMISTRY/ALCOHOLISM. Seeking a doctoral level research scientist with established or beginning research on neurochemical factors in alcoholism. Particularly interested in person with research interest in benzodiazepine receptor sites and mechanisms of cross-addiction. Curriculum vitae to: **Howard Blane, Director, Research Institute on Alcoholism, 1021 Main Street, Buffalo, NY 14203; telephone: 716-887-2557.** An Equal Opportunity Affirmative Action Employer.

OCEANOGRAPHY DEPARTMENT HEAD Texas A&M University

Texas A&M University seeks a Head for its Department of Oceanography. The university intends to fill the position by the beginning of the fall semester 1987. The department is a part of the Division of Atmospheric and Marine Sciences within the College of Geosciences at College Station, TX. Other elements of the division include the Ocean Drilling Program, the Department of Meteorology, and the Texas A&M University Sea Grant Program. The Oceanography Department operates the R/V *Gyre* and smaller vessels, including a submersible, from facilities located in Galveston. Research activities span all the major subdisciplines of oceanography and include strong interactions with climate studies and marine geophysics. Within the division are located the U.S. Planning Office for the World Ocean Circulation Experiment and a new program in Climate System Research. Research funding for the department for the 1984 to 1985 year was \$8.6 million, including about \$1.8 million from the state of Texas. The department, which was founded in 1949, currently has a faculty of 30, a scientific support staff of about 60, and about 110 graduate students enrolled in programs leading to the M.S. and/or Ph.D. degree. The successful candidate should be an internationally recognized marine scientist with leadership credentials. The closing date for accepting applications is 30 January 1987. Resumes and names of references should be sent to the chairman of the search committee: **Dr. Gerald R. North, Department of Meteorology, Texas A&M University, College Station, TX 77843-3146, Telephone: 409-845-8083.** Inquiries and suggestions of names are welcome. Texas A&M University is an Equal Opportunity/Affirmative Action Employer.

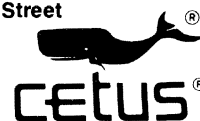
Research Assistant- DNA Sequencing Group

A challenging position is available in the DNA sequencing group at Cetus Corporation, a leader in biotechnology-based therapeutics for cancer and infectious disease. Based in our Emeryville headquarters, the successful candidate will join a group highly skilled in DNA sequence analysis and related molecular biology for involvement in a wide variety of research projects.

Applicants must have a B.S. in a relevant field and be experienced in DNA sequencing and related molecular biology techniques. Strong organizational skills as well as the capability to function independently are required.

Cetus offers competitive salaries and excellent benefits. For confidential consideration, please send your resume to:

CETUS CORPORATION
Box MIS
1400 Fifty-third Street
Emeryville,
CA 94608
E/O/E



NIOSH ANNOUNCES RESEARCH AWARDS

FOR Ph.D. & M.D.

SCIENTISTS

The National Institute for Occupational Safety and Health announces outstanding opportunities for research in:

- bioengineering • pathology
- biochemistry • physiology
- immunology • pharmacology
- mutagenesis • epidemiology

The National Research Council in cooperation with the National Institute for Occupational Safety and Health, Division of Respiratory Disease Studies in Morgantown, West Virginia will offer competitive research awards in 1987 for independent scientific research. Recipients will be free to work on problems of their own choice as guest investigators at NIOSH. This program is open to experienced senior scientists as well as to recent PhD and MD graduates. Stipends begin at \$26,350 for recent graduates and are appropriately higher for seniors. Relocation reimbursement and funds for professional travel on tenure are available, and a health insurance program is offered.

For further information and application materials please write to:
Associate Programs (JH608/NI1)

National Research Council

2101 Constitution Avenue, N.W.
Washington, D.C. 20418

Deadline for application
January 15.

JUNIOR FACULTY

THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY is seeking applicants for a tenure-track, assistant professor position in human language and speech or reasoning and knowledge representation. The opening is part of an initiative to foster computational approaches to the cognitive and brain sciences. The candidate must have a strong mathematical or formal background and demonstrate expertise in devising computational algorithms applicable to understanding information processing by the mammalian brain. The subject of the candidate's research can pertain to the perception or production of language and speech, hearing, conceptual organization and inference, semantic memory, modeling of human expertise, knowledge acquisition, or related topics. Candidates should be prepared to teach graduate and undergraduate subjects and to develop funded research programs. Depending on the interests and training of the candidate, the appointment will be either in the Department of Electrical Engineering and Computer Science, Linguistics and Philosophy or the Department of Brain and Cognitive Sciences and may be joint with the Artificial Intelligence Laboratory or the Research Laboratory of Electronics.

Applicants should send their resume, reprints and the names of three references by February 1, 1987 to Professor W. Richards, E10-120, Massachusetts Institute of Technology, 79 Amherst Street, Cambridge, MA 02139.

MIT is an equal opportunity employer. Qualified women and minorities are encouraged to apply.

MIT

Saudi Arabia

The King Fahad Hospital, Saudi Arabian National Guard, an accredited 300 bed facility in Riyadh, the capital of the Kingdom of Saudi Arabia has an immediate opening for:

NURSE EPIDEMIOLOGIST

The successful candidate must have a BSN, be currently licensed to practice nursing, must have completed a basic course in hospital infection control and have a minimum 4 years nursing experience, of which 2 years is in infection control.

The Saudi Arabian National Guard is offering ONE YEAR RENEWABLE CONTRACTS with a competitive salary and benefits package. Lengthy paid vacations and significant tax advantages make this both an exciting and professionally rewarding adventure. An active Inservice Education Department also offers CEU's.

To learn more about this opportunity call or send your resume today to: Dept. SC11, Hospital Corporation of Canada Limited, Two Robert Speck Parkway, Suite 1410, Mississauga, Ontario L4Z 1H8 Canada.

Hospital Corporation of Canada Limited

Authorized Representative
HCA International Ltd.

Chemists

LILLY RESEARCH LABORATORIES, a Division of Eli Lilly and Company, is seeking candidates for immediate opportunities in Pharmaceutical Research and Development. Applicants must have a B.S. or M.S. degree in Chemistry and practical industrial or academic research laboratory experience is desirable. In addition, candidates should possess good problem solving and communication skills.

Analytical Chemists

Development and application of analytical methods for new pharmaceuticals, raw materials and process intermediates. Emphasis is placed on instrumental analysis, particularly separation techniques such as HPLC, gas chromatography, thin layer chromatography, etc.



Biochemists

Bioassay-guided isolation and purification of fermentation products using a combination of the following techniques: Filtration, solvent extraction, solvent partitioning, ion exchange and absorption chromatography, and HPLC. Candidates should have good analytical skills, experience in analytical and preparative TLC and HPLC, and an ability to interpret MS, NMR, UV, and IR data.

Organic Chemist

Organic chemical synthesis of pharmaceutical compounds and intermediates. Candidates must have good laboratory skills and experience with analytical instruments such as HPLC, NMR, IR, and UV.

Send resume to:

James C. Mercer
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, IN 46285

Equal Opportunity Employer

POSITIONS OPEN

ORGANIC CHEMIST. Hamilton College is seeking an organic chemist for a tenure-track position beginning in fall 1987. Preference will be given to a synthetic organic chemist, although all areas of research expertise will be considered. Applicants should have a strong interest in both teaching and research at the undergraduate level. The department is reasonably equipped with up-to-date instrumentation, and the college expects to provide start-up funds to support the new faculty member. Teaching responsibilities include both upper level and beginning organic chemistry. Applicants should send a current résumé and transcripts along with a covering letter; they should also arrange for three letters of recommendation. All materials should be received by 1 February 1987. Apply to: **Professor Robin B. Kinnel, Department of Chemistry, Hamilton College, Clinton, NY 13323.** *Hamilton College is an Equal Opportunity Employer, and women and minority candidates are encouraged to apply.*

ORTHOPAEDIC SURGEON ACADEMIC APPOINTMENT

The Section of Orthopaedic Surgery at the University of Michigan Medical School is presently recruiting two full-time faculty physicians at the instructor or assistant professor level. Both should be Board-certified or -eligible for certification; one with specialty training in spine surgery and/or trauma (fellowship training in spine or trauma is desirable); the other a strong interest in general orthopaedics.

Applicants should demonstrate outstanding teaching and clinical care abilities and have significant associated basic science research interest. Please send curriculum vitae and cover letter to:

Larry S. Matthews, M.D., Professor
Section of Orthopaedic Surgery
TC/2912D Box 0328
1500 East Medical Center Drive
Ann Arbor, MI 48109

PHARMACOLOGISTS

The Department of Pharmacology has a tenure-track opening for an assistant professor or associate professor of pharmacology. Candidates must have a doctorate degree with training in pharmacology and must have a strong capacity for independent research which will have a high probability of attracting external financial support. Some teaching experience is desirable since the position requires participation in all teaching programs of the department, including programs for medical, dental, and graduate students. The university is located on a modern, 50-acre new campus in Newark and is in close proximity to a wide variety of living styles. Many opportunities are available in the geographic area for academic and scientific interactions. Send curriculum vitae including the names of three references to: **Dr. George A. Condouris, Professor and Chairman, Department of Pharmacology, University of Medicine and Dentistry of New Jersey-New Jersey Medical School, 185 South Orange Avenue, Newark, NJ 07103-2757.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL ASSOCIATE

Massachusetts Institute of Technology (MIT) postdoctoral positions in biotechnology. Research areas include the novel use of enzymes for treating hypercholesterolemia and oral delivery systems for polypeptide drugs. Backgrounds in biochemistry, chemistry, chemical engineering, biomedical engineering, or related areas desirable. Send curriculum vitae and list of references to: **Professor Robert Langer, MIT, 77 Massachusetts Avenue, E25-342, Cambridge, MA 02139.** *MIT is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE IN CARDIAC CELL ELECTROPHYSIOLOGY: Available immediately for 2 years, with a possible faculty appointment thereafter. Research involves whole cell patch and patch clamping techniques to study the conduction properties of calcium channels in diseased mammalian cardiomyocytes. Applicants must have prior experience with electrophysiological techniques using intracellular microelectrodes. Send cover letter, curriculum vitae, a summary of research interests, and three references to: **Dr. Kenneth L. Rossner, Department of Physiology, New York College of Osteopathic Medicine, Old Westbury, NY 11568.**

POSITIONS OPEN

PHARMACOLOGY AND TOXICOLOGY UNIVERSITY OF UTAH

Two **TENURE-TRACK ASSISTANT/ASSOCIATE PROFESSOR** positions are available in the Department of Pharmacology and Toxicology at the University of Utah. Candidates should have a doctoral degree, significant postdoctoral research experience, a strong record of research accomplishment, and a demonstrated ability to conduct an independent research program in an academic setting. Candidates should also have a strong commitment to teaching at both graduate and undergraduate levels.

One position will be in **cancer pharmacology** and will also be associated with the newly established Regional Cancer Center. For the second position, preference will be given to candidates with expertise in either **biochemical toxicology, cardiovascular, or behavioral pharmacology.**

Candidates should submit a letter of application, a brief statement of research goals, curriculum vitae, and names of at least three persons who can provide letters of recommendation to: **Dr. J. W. Gibb, Chairman, Department of Pharmacology and Toxicology, 113 Skaggs Hall, University of Utah, Salt Lake City, UT 84112.** Applications should be submitted by 26 December 1986, but later applications may be considered if no qualified candidates have applied by the deadline.

The University of Utah is an Equal Opportunity Employer.

POSTDOCTORAL POSITION PROTEIN KINASES

Available December 1986, to study changes in cAMP-dependent protein kinases during normal and neoplastic mouse lung development [see *Cancer Res.* 45, 3677 (1985)]. Studies to include immunoblotting, immunocytochemistry, cell isolation, carcinogenesis, and mouse genetics. A good biochemical background, as well as an interest in protein chemistry and cyclic nucleotides is desirable. Interested candidates should send curriculum vitae and names of three references to: **Dr. Alvin M. Malkinson, Molecular and Environmental Toxicology Program, School of Pharmacy, University of Colorado, Boulder, CO 80309-0297.** *The University of Colorado at Boulder has a strong institutional commitment to the principle of diversity. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including women, members of ethnic minorities and disabled individuals.*

ENDOWED PROFESSORSHIP: COGNITION/ARTIFICIAL INTELLIGENCE

The Graduate School of the University of Minnesota seeks applications for the Fesler-Lampert University professorship in cognitive science and artificial intelligence—an endowed position with tenure. Candidates should have a distinguished record of interdisciplinary or multidisciplinary research in two or more of the following areas: (i) computational and/or quantitative models of cognitive or sensory processes; (ii) artificial intelligence; (iii) problem solving, decision making, choice behavior, and/or human reasoning; (iv) language comprehension and/or production; (v) cognitive development; (vi) action systems; (vii) neural models/mechanisms of cognition; or (viii) human memory. The excellence of the candidate irrespective of research focus will be an important consideration. Teaching responsibilities are flexible, but should include courses that contribute to the research training of graduate students in more than one department (for example, psychology, linguistics, computer science, child development, educational psychology, management science, . . .) and to the university's evolving program in cognitive science and artificial intelligence. Salary level is highly competitive and depends upon qualifications and experience. Candidates should submit curriculum vitae, three representative publications, and a letter of interest summarizing their research goals to: **Search Committee in Cognitive Science, and Artificial Intelligence, Center for Research in Learning, Perception and Cognition, 205 Elliott Hall, 75 East River Road, University of Minnesota, Minneapolis, MN 55455.** *Applications should be received by 15 December 1986. The University of Minnesota is an Equal Opportunity Employer and specifically invites and encourages applications from women and minorities.*

POSITIONS OPEN

POSTDOCTORAL POSITION is available for a biology-trained person at the Chemistry Department. A Ph.D. in biology, cell biology, or molecular biology is required, to work in the applications and development of a novel type of optical microscope. The person should have a good training in *in vitro* growth of mammalian cells, chromosome isolation techniques, experience with traditional optical microscopy including: expertise in staining and fixation procedures, immunofluorescence methods, *in vitro* hybridization and generation of monoclonal antibodies. A general knowledge of basic spectroscopy would be desirable, but not essential for the job. The position is available for a minimum period of 2 years and will involve collaborations with the University of New Mexico Medical School. Send curriculum vitae to: **Professor Carlos Bustamante, Chemistry Department, University of New Mexico, Albuquerque, NM 87131.** Telephone: 505-277-3926.

POSTDOCTORAL POSITION available 1 January 1987 to study gene expression and intracellular localization of alpha-1-antitrypsin in normal and mutated forms in cultured liver cells. Experience would be useful in areas of molecular cloning, gene transfection, liver gene expression, chromatin structure, and glycoprotein metabolism. Send curriculum vitae with names of two references to: **Edward M. Johnson, Brookdale Center for Molecular Biology and Department of Pathology, THE MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, NY 10029.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION: Effect of active site mutation on enzyme function. This project involves a study of the results of changes induced by site directed mutagenesis in specific amino acid residues at the active site of an enzyme. Biophysical and biochemical methods will be used to study effects on binding and release of substrates, products and inhibitors (including anticancer agents), on conformation changes and on the catalytic process. Applicants should have a strong background in enzymology. Starting salary for applicants with no postdoctoral experience \$20,000. Position 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.**

POSTDOCTORAL POSITION—BIOCHEMIST/CELL BIOLOGIST. Immediate opening in a well-funded, well-equipped laboratory, involving isolation of pancreatic acini, lobules, hepatocytes and fibroblasts, and the purification of proteases. Applicants should be familiar with radioimmunoassay, HPLC, electrofocusing, cDNA probes, and protein purification. Contact: **Michael C. Geokas, M.D., Ph.D., Professor of Medicine and Biological Chemistry, VA Medical Center, Martinez, CA 94553.** Telephone: 415-228-6800, extension 535.

HAROLD H. BAILEY PROFESSOR OF BIOLOGY VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

The Department of Biology invites applications and nominations for the Harold H. Bailey professor of biology. This professorship was endowed by the Bailey Research Trust in honor of the late Harold H. Bailey, a noted amateur biologist and natural historian. We are seeking a senior-level, internationally recognized scholar from the field of vertebrate biology, broadly defined. We seek applicants who are addressing fundamental biological questions using modern research approaches. It is expected that the Bailey professor will contribute to the instructional mission of the university and conduct original research of the highest caliber.

Application materials should include curriculum vitae, a statement of anticipated future research directions, and names of three potential references. Applicant evaluation will begin 1 November 1986 and will continue until the position is filled. Applications and nominations should be sent to:

E. R. Stout, Head
Department of Biology
Virginia Polytechnic Institute and State University
Blacksburg, VA 24061

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We are seeking recent PhD's in Biochemistry or Pharmacology interested in biochemical studies concerning the mechanism of Ca^{+2} regulation in cell secretory functions, smooth muscle contraction, and myocardial ischemia.

The scientists involved in these projects will conduct exploratory research studies to support future drug development programs in the Allergy, Inflammation, and Cardiovascular Programs in Pharmacology at Hoffmann-LaRoche. Please send your C.V. to: Mrs. R. Chiaramonte, Bldg. 76, Room 926.



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The Ames Division of Miles Laboratories, Inc., a leader in the clinical diagnostics industry, has three positions available in the Research and Development Group.

One position is in the Dry Reagent Chemistry Group. Candidates should have a Ph.D. or the equivalent in demonstrated expertise in biochemistry, bio-organic or biophysical chemistry with post-doctoral and/or industrial experience. Excellent communication skills and the ability to function as a member of a team are required to enable productive interactions in an interdisciplinary environment. Computer skills would be helpful. Candidates should have a background and a publication record demonstrating the ability to tackle non-routine problems in creative ways.

The other two positions are in the Immunodiagnostics Group. These positions will require a Ph.D. or the equivalent in demonstrated expertise in biochemistry or immunochemistry with 2-3 years of industrial experience. Experience in development activities in the diagnostic industry, especially with dry-phase reagent/instrument systems is highly desirable. With appropriate experience, these positions will involve supervision of other scientists.

Situated approximately 90 miles from Chicago, our South Bend Elkhart, Indiana location provides access to leading cultural and multi-university facilities. Close proximity to lower Michigan and the Great Lakes furnishes unique recreational opportunities. Miles offers an excellent starting salary, superior benefits program and company paid relocation.

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Linda A. Heiland
Sr. Personnel Representative
Dept. 213
Miles Laboratories, Inc.
P.O. Box 40
Elkhart, IN 46515

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Scientist — Protein Purification and Process Development

At Cetus Corporation, we are committed to maintaining a leading role in the research and development of biotechnology-based products.

We have an opening in our Process Development Department for an individual to be part of a team developing purification processes for therapeutic proteins. The individual will be responsible for final purification, characterization, and scale-up of processes. The individual should have a demonstrated working knowledge of modern techniques of protein purification. Experience in protein analytical techniques and chemical modifications is also desirable. The successful candidate will possess a Ph.D in biochemistry or a related field. One to three years' further relevant experience is desirable but not required.

Please send your resume in confidence to:

Cetus Corporation
P.O. Box JTSC
1400 Fifty-third Street
Emeryville, CA 94608

E/O/E



As part of a world wide leader in the diagnostics field, our Swiss based European manufacturing operation is seeking a

MANAGER BIO-PROCESSES

The successful candidate should have a sound academic background in biology related subjects and experience in mammalian cell culture and protein purification.

Applicants must be self-starters with good management skills to integrate well with existing research and manufacturing groups. Competency in German would be a distinct advantage.

Please send C.V., references and salary history to the

Personnel Department
Merz + Dade AG
CH-3186 Duedingen / Switzerland

IOWA STATE UNIVERSITY

FACULTY POSITIONS IN MOLECULAR BIOLOGY



Iowa State University welcomes applications for tenure-track faculty positions that will play a vital role in its expanding program of molecular biology. The State of Iowa has committed \$18 million to ensure that the university has a quality effort in the application of molecular biology to agriculture. These positions have competitive salaries at levels commensurate with experience. Each position will have \$150,000 in start-up

funds and access to newly established university-wide facilities with state-of-the-art instruments for nucleic acid, cell, and protein research. Interested individuals should submit a curriculum vitae, brief statement of research interests, and three letters of reference to the appropriate contact. Closing date: January 20, 1987, or until positions are filled.

Molecular Biologist Dept. of Plant Pathology

The successful candidate will be expected to develop a cooperative program of basic research on the molecular mechanisms involved in plant-parasite interactions. Approaches may include, but are not limited to, molecular genetics, physiology or biochemistry of the interaction of fungi, bacteria, viruses, or nematodes with plants. The individual will share in the instructional duties of the department. Postdoctoral experience is preferred.

Contact:
Dr. John H. Hill
Molecular Biology Search Committee
Department of Plant Pathology
351 Bessey Hall
Iowa State University
Ames, Iowa 50011

Molecular Biologist Dept. of Animal Science

This individual will be expected to develop a basic research program in gene expression in muscle, collaborate with current faculty working on the biochemistry and structure of muscle, and participate in instructional programs. Possible research areas include regulation of muscle protein expression and molecular biology of muscle growth. A Ph.D. is required. Experience with recombinant DNA techniques is essential; preference will be given to applicants with experience in the molecular biology of eukaryotic organisms.

Contact:
Dr. S. A. Ewing, Head
Department of Animal Science
101 Kildee Hall
Iowa State University
Ames, Iowa 50011

Microbiologist Dept. of Microbiology

The successful candidate will conduct basic research at the molecular level on the role of microorganisms in plant growth; plant health and development; animal health; or new agricultural products. Immunological skills are highly desirable. The individual will share in the instructional duties of the department. A Ph.D. in microbiology or a closely related discipline and postdoctoral experience are required. Preference will be given to applicants with teaching and/or industrial experience.

Contact:
Dr. Fred D. Williams, Chairman
Department of Microbiology
Iowa State University
Ames, Iowa 50011

Nutritional Toxicologist Dept. of Food and Nutrition

The department seeks an individual who has a Ph.D. in nutrition or a closely related field and has expertise in molecular and immunological approaches to nutritional toxicology. The person will contribute to the existing university-wide teaching and research programs in toxicology and nutrition. Development of a research program which will foster interdisciplinary activity with immunobiology scientists is expected.

Contact:
Dr. T. J. Runyan
104 MacKay Hall
Iowa State University
Ames, Iowa 50011

Food Biotechnologist Dept. of Food Technology

The successful candidate will be expected to develop a research program applying molecular and biotechnological techniques to the modification and control of the physical, functional, or flavor properties of plant food crops in cooperation with the Food Crops Processing Research Center. Desirable research areas include carbohydrates and edible oils. A Ph.D. in food technology, biochemistry, or a related field is required and postdoctoral or industrial experience is preferred. The individual will share in the instructional duties of the department.

Contact:
Dr. Earl G. Hammond, Head
Dept. of Food Technology
Iowa State University
Ames, Iowa 50011

Fungal Molecular Biologist Dept. of Botany

The individual will conduct research on the molecular biology of fungi. Preference will be given to applicants with research interest and postdoctoral experience in filamentous fungi and in plant-fungus relations. Teaching responsibilities will include a one-semester graduate course in the applicant's specialty and participation in a one-semester undergraduate course.

Contact:
Dr. Ronald C. Coolbaugh, Chair
Dept. of Botany
Iowa State University
Ames, Iowa 50011

Plant Molecular Geneticist Dept. of Horticulture

The position requires the development of a collaborative research program to enhance horticultural crops with the use of modern molecular methods. Research areas include, but are not limited to, gene expression/regulation, genetic control of development, and genetic modification of plant products. Teaching duties will include a graduate course in the use of molecular methods for plant improvement. A Ph.D. is required. Postdoctoral experience is preferred.

Contact:
Dr. Loren Stephens, Chair
Search Committee
Dept. of Horticulture
Iowa State University
Ames, Iowa 50011

Animal Virologist Dept. Vet. Microbiol. & Prev. Med.

The department seeks a virologist with experience in the application of molecular biology to the prevention, diagnosis, and control of animal diseases. Research experience with animal pathogenic viruses and viral diseases of domestic animals is preferred. Strong candidates will possess DVM/Ph.D. or Ph.D. degrees, an active research program, or interest in respiratory and/or enteric diseases of domestic animals. Teaching requirements comprise a shared course of animal virology for veterinary students, a graduate course in molecular virology, and training of graduate students.

Contact:
Dr. T. T. Kramer, Chairman
Dept. Vet. Microbiol. & Prev. Med.
Iowa State University
Ames, Iowa 50011

Molecular Developmental Biologist Dept. of Zoology

The department seeks a developmental biologist who will use molecular approaches to study the regulation of gene expression in a developing eukaryotic organism. The successful candidate will complement a university and departmental commitment to strengthen research in modern developmental biology. Modest teaching responsibilities will encompass the successful candidate's area of expertise.

Contact:
Dr. Richard Hallberg
Dept. of Zoology
339 Science II
Iowa State University
Ames, Iowa 50011

Iowa State University is an Equal Opportunity Employer. Women, minorities, and members of other protected groups are strongly encouraged to apply.

RESEARCH OPPORTUNITIES IN CANCER THERAPEUTICS

The Dow Chemical Company, in Midland, Michigan, is a recognized world leader in the chemical industry. Expanded research efforts in the area of cancer therapeutics and immunotherapy have created an immediate need within the Biotechnology Laboratory in the Central Research Department for qualified researchers in the following areas:

MOLECULAR BIOLOGY/ EUKARYOTIC GENE CLONING

The successful candidate will have a Ph.D. and two or more years of post doctoral experience in genetic engineering. Experience in cDNA cloning, preparation and screening of genomic libraries, eukaryotic expression vectors, and DNA sequencing is required. Research efforts will be directed toward protein design for application in our biotech-based cancer therapeutic program.

The above candidates must also possess strong communication 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.

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Midland, MI 48641-1655



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Applied bioTechnology is a growing company specializing in:

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We are seeking highly-qualified individuals with at least two years of post-doctoral experience, with expertise in the analysis of gene structure and function to assume key roles in the direction of our vaccine and cancer programs. Experience with cloning and manipulation of genes is highly desirable.

Please submit your c.v. to Applied bioTechnology, Inc., 80 Rogers Street, Cambridge, MA 02142.

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IOWA STATE UNIVERSITY

GRADUATE AND POSTDOCTORAL FELLOWSHIPS IN MOLECULAR BIOLOGY



Iowa State University invites applications for graduate and postdoctoral fellowships in its expanding university-wide program designed to enhance the development and application of molecular biology to agriculture. Funded as part of an \$18 million appropriation from the State of Iowa, these fellowships will be awarded to individuals seeking to develop expertise in molecular biology.

The stipend for a graduate fellowship is \$15,000 per year for a minimum of two years. The fellows will pay half the in-state tuition.

The annual salary for a postdoctoral fellowship is \$22,000-\$26,000, plus an additional 21.7% in fringe benefits.

Positions are available in the following research projects:

- *Association of molecular genetic markers and economic traits of soybean*—R. Palmer, S. Cianzio, W. Fehr, R. Shoemaker.
- *Gene regulation during animal growth and development*—M. Nilsen-Hamilton, L. Anderson, J. Girtton, D. Graves, R. Hamilton, A. Trenkle, W. Welshons.
- *Gene transfer studies in maize and soybean*—R. Benbow, J. Stadler, D. Morris, D. Robertson.
- *Genetic engineering of proteins to improve recovery of fermentation products*—C. Glatz, C. Ford, S. Gendel, M. Rougvi.
- *Identification of plant genes for environmental stress tolerance*—C. Stewart, S. Bishop, E. Hack, R. Hallberg, M. Spalding.

- *Interaction of mitochondrial and nuclear DNA in regulation of milk production*—D. Beitz, A. Freeman, J. Mayfield.
- *Molecular analysis of transposon-driven variability in maize breeding*—P. Peterson, A. Hallauer, K. Lamkey.
- *Molecular characterization and gene-cloning of the *Bordetella avium* adhesin*—L. Arp, R. Griffith.
- *Molecular immunogenetics of disease resistance and reproductive efficiency in domestic animals*—C. Warner, S. Ford, S. Lamont, M. Rothschild.
- *Molecular modification of microorganisms for production of propionic acid*—B. Glatz, C. Bern, C. Glatz, E. Hammond, L. Johnson, P. Pattee.
- *Molecular mutagenesis of glucoamylase*—P. Reilly, C. Ford.
- *Recombinant DNA technology for the production of more effective mucosal immunogens in swine*—M. Wannemuehler, R. Griffith, J. Mayfield, P. Paul, R. Rosenbusch.
- *Vector insects as disseminators of plasmid diversity in pathogenic bacteria*—R. Rosenbusch, E. Krafur.

For more detailed information about the positions and application forms, contact the **Office of Biotechnology, 1301 Agronomy, Iowa State University, Ames, Iowa 50011**. Closing date: January 20, 1987, or until positions are filled.

Iowa State University is an Equal Opportunity Employer. Women, minorities, and members of other protected groups are strongly encouraged to apply.

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to study the molecular biology and immunopathology of intestinal basement membrane. Background in transcriptional and/or translational analyses essential. Send curriculum vitae, names, and addresses of three references to: **Dr. Milton M. Weiser, State University of New York, at Buffalo (SUNY), Division of Gastroenterology, Buffalo General Hospital, Kimberly Building, 100 High Street, Buffalo, NY 14203. SUNY is an Equal Opportunity and Affirmative Action Employer.**

POSTDOCTORAL POSITIONS now available to study the enzymology, cellular, and molecular biology relevant to the action of folate antimetabolites active at sites other than dihydrofolate reductase. Outstanding projects for the right individuals. Recent Ph.D. in biochemistry, biochemical pharmacology, or molecular biology required. Send curriculum vitae and the names of three references to: **Dr. Richard Moran, Division of Hematology-Oncology, University of Southern California/Children's Hospital of Los Angeles, 4650 Sunset Boulevard, Los Angeles, CA 90054-0700.**

POSTDOCTORAL POSITIONS IN VASCULAR PHARMACOLOGY (two) available immediately. (i) Influence of age on adrenergic reactivity and (ii) characterization of pre-junctional and post-junctional peptide receptors. Involves study of smooth muscle in vitro and measurement of transmitter release. Send curriculum vitae and three references to: **S. P. Duckles, Ph.D., Department of Pharmacology, College of Medicine, University of California, Irvine, CA 92717. The University of California is an Affirmative Action Employer.**

Professor/Program Director of Environmental and Occupational Health Sciences. The School of Public Health at the University of Illinois at Chicago is recruiting a professor to serve as program director of Environmental and Occupational Health Sciences (EOHS). This will be a tenured position. EOHS is one of four academic programs in the School of Public Health. EOHS academic tracks include environmental quality, industrial hygiene, occupational medicine, and risk assessment. The program has 13 salaried faculty members.

The candidate should have a recognized national authority in environmental sciences and epidemiology. Research experience should be demonstrated in the receipt of major research grants, as well as major publications in peer reviewed journals. Citation in major journals and standard reference works is desirable. Previous administrative experience is also required. A minimum of a doctoral degree and extensive experience in public health is required.

The position will be a full-time position. Salary will be commensurate with training and experience. Applications should be received by 1 January 1987. Send curriculum vitae to: **Louis Rowitz, Ph.D., Associate Dean for Academic Affairs, and Chair, Search Committee, School of Public Health, University of Illinois at Chicago, Post Office Box 6998, Chicago, IL 60680. The University of Illinois is an Affirmative Action/Equal Opportunity Employer.**

PROTEIN CHEMIST

An opportunity is available for a biochemist with experience in protein structure studies. Candidate must have a doctoral degree in biochemistry and a minimum of 5 years of experience in the field of protein chemistry. Must be accomplished in the preparation of proteins and peptides by modern HPLC methods and the analysis of their composition and primary sequence. Must be experienced in the use of gas phase sequencer. Must be experienced in the use of computers to predict structure. Position is located in the Division of Medical Genetics, Department of Pediatrics, University of Southern California at Children's Hospital of Los Angeles. Joint appointment in biochemistry is available. Excellent opportunities are available for collaboration and extension of interests to challenging cell biologic questions of protein translocation and membrane integration. Salary, academic rank, and tenure status are determined by experience and record of productivity. Send curriculum vitae, representative publications, statement of research interests, and names of three references to: **John A. Barranger, M.D., Ph.D., Head, Division of Human Genetics, Children's Hospital of Los Angeles, 4650 Sunset Boulevard, Los Angeles, CA 90027. Children's Hospital of Los Angeles and the University of Southern California are Affirmative Action Employers.**

POSITIONS OPEN

OHIO UNIVERSITY DEPARTMENT OF CHEMISTRY AND PROGRAM IN MOLECULAR AND CELLULAR BIOLOGY

A vacancy exists at the assistant professor level for an animal molecular biologist to augment the research and teaching activities of the department and program. Generous start-up funds and support services are available for the appointment. Applicants should have a Ph.D. and postdoctoral experience in recombinant DNA technology and experience in the cloning of animal genes. Letters of application, curriculum vitae, and a statement of research interests and projects must be received by 15 December and applicants should also arrange for three letters of recommendation to be sent directly to: **Dr. P. Johnson, Department of Chemistry, Ohio University, Athens, OH 45701. Ohio University is an Affirmative Action/Equal Opportunity Employer.**

PROTEIN CHEMISTRY/ MOLECULAR GENETICS

The Department of Molecular Biology and Genetics, in establishing a facility for protein structure analysis, is seeking applications for a tenure stream position. Opportunities include:

New research and teaching facilities on a historic and picturesque campus.

Established graduate and undergraduate programs in molecular biology and genetics.

Unlimited opportunities for collaborative research in biotechnology and agriculture through the Guelph-Waterloo Biotechnology Institute and the Ontario Colleges of Agriculture and Veterinary Medicine.

Low living costs in a small and pleasant community located close to large urban centers.

The candidate is expected to establish an active research program with some focus on eukaryotic genetics or related areas of cell and molecular biology, and to supervise a protein analysis service. Rank and salary will be commensurate with experience; position is subject to final budgetary approval.

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

Send application and three references to: **Ross N. Nazar, Chairman, Department of Molecular Biology and Genetics, College of Biological Science, University of Guelph, Guelph, Ontario, Canada, N1G 2W1.**

RESEARCH ADMINISTRATOR

The Alzheimer's Disease and Related Disorders Association invites applications for executive secretary to the Medical and Scientific Advisory Board (MSAB). The executive secretary will administer a \$2-million-plus extramural research program, evaluate educational materials, function as in-house spokesperson, and develop and maintain contacts with federal/professional/scientific organizations. Applicants must have Ph.D. in science relevant to aging, neuroscience, Alzheimer's disease, or related disorders; training and/or experience in medical/scientific research administration; excellent oral and written communication skills; and ability to work effectively with laypersons, as well as physicians and scientists. Salary competitive. Send curriculum vitae, three letters of reference, and letter of inquiry by 2 January 1987 to: **MSAB Services, ADRDA, 70 East Lake Street, Suite 600, Chicago, IL 60601.**

RESEARCH ASSISTANT PROFESSOR in cell biology and biophysics to participate in independent and team research in studies examining alterations in cellular ionic metabolism and gene expression that accompany stimulation of cell growth and cell death. Approaches include quantitative digitized video microscopy, computer enhanced image analysis resonance energy transfer, and biochemistry. Background in biophysics or biomedical engineering with practical experience in computer programming. Ph.D. required. Send curriculum vitae to: **Dr. C. R. Hackenbrock, Laboratories for Cell Biology, University of North Carolina at Chapel Hill, 108 Swing Building 217H, Chapel Hill, NC 27514, no later than 1 January 1987. Women and minorities are encouraged to voluntarily identify themselves. The University of North Carolina at Chapel Hill is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

REPRODUCTIVE BIOLOGISTS

Two core-staff positions. The University of Wisconsin Regional Primate Research Center seeks innovative, independent scientists to conduct research on reproduction of monkeys. Preferred areas include immunology, aging, implantation, or male reproduction, especially using molecular or cellular approaches. Collaborative opportunities available in areas of behavior, embryogenesis, endocrinology, cell biology, neuroendocrinology, and pathology. Salary and level of appointment are open. Requirements are a Ph.D., M.D., or equivalent, and postdoctoral experience. To apply, send curriculum vitae, three significant publications, statement of research goals, and three letters of recommendation by 15 January 1987 to: **Search Committee, Wisconsin Primate Center, 1223 Capitol Court, Madison, WI 53715.**

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

RESEARCH ASSOCIATE—ELECTRON MICROSCOPY. We are seeking a senior EM person with demonstrated experience in the study of human cells and tissues, including: immuno- and cytochemistry; use of frozen ultrathin sectioning or post-embedding techniques; photomicrography; maintenance of light- and electron microscopes. The successful candidate will participate in the design and implementation of experiments. Additional expertise in two of the following areas is required: quantitative image analysis; EM of viruses or macromolecules; autoradiography; microcomputers. Please send résumé and names/addresses of three references to:

**Dr. Marc M. Friedman
Chair, Search Committee
Division of Molecular Virology and Immunology
Georgetown University Medical Center
5640 Fishers Lane
Rockville, MD 20852**

Equal Opportunity/Affirmative Action Employer

RESEARCH CARDIOLOGIST. Academic Division of Cardiology is seeking an M.D., Ph.D. with proven experience in an area of basic science (for example, receptors molecular biology) to develop research laboratory. Current areas of active experimental research include myocardial ischemia and studies on myocardial contractility. Excellent salary and fringe benefits. Should be eligible for assistant/associate professorship at State University of New York—Stony Brook. Send curriculum vitae in confidence to: **Monty M. Bodenheimer, M.D., Chief, Division of Cardiology, LONG ISLAND JEWISH MEDICAL CENTER, New Hyde Park, NY 11042. An Equal Opportunity Employer.**

RESEARCH TECHNICIAN position available immediately in transmission electron microscopy. Applicant must have experience in EM procedures and interested in pursuing EM as a career. Salary is negotiable. Send curriculum vitae to: **Dr. Betty Ruth Jones, Department of Biology, Morehouse College, Atlanta, GA 30314.**

RESEARCH LABORATORY TECHNOLOGIST FULL-TIME

We have important positions open for technicians who have extensive experience in: molecular biology; steroid radio-immunoassays; isotope handling and tissue culture. Projects range from: (radiation-induced damage to DNA and cells) to (assessment of human T-lymphocytes) to (flow cytometer studies of fluoresceinated monoclonal antibodies) to (physiology and surgical studies). Many additional projects exist. Requires: B.S./M.S. chemistry, biology, biochemistry, with 3 to 5 years of related work experience.

Call or send résumé to: **Harold Gregory, Employment Services Office, Massachusetts General Hospital, Fruit Street, Boston, MA 02114; telephone 617-726-2205.**

We are an Equal Opportunity/Affirmative Action Employer.

TOXICOLOGIST

Expanding toxicology contract laboratory in Houston (established over 11 years) seeks Ph.D. with 2 to 5 years of chronic testing experience. Contract laboratory experience preferred. Mail curriculum vitae and salary requirements to: **Personnel Director, STILLMEADOW, Inc., 9525 Town Park Drive, Houston, TX 77036.**

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SR. RESEARCH INVESTIGATOR

Du Pont Critical Care is contributing to the advancement of modern healthcare as an innovative pharmaceutical company.

An opportunity to join Du Pont Critical Care's cardiovascular research team exists for a highly qualified doctoral level scientist with experience in the pathophysiology of myocardial ischemia. The candidate should possess a Ph.D. in cardiovascular physiology or pharmacology with 2-3 years of post-doctoral training.

Suitable candidates should possess a strong publication record of experience in ischemia-related ventricular dysfunction and metabolic abnormalities or in the regulation and pharmacological modification of coronary blood flow. The successful candidate will function as a member of a team of scientists dedicated to the discovery of novel therapeutic approaches to the treatment of cardiovascular disease.

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Du Pont Critical Care, Inc.
1600 Waukegan Road
Waukegan, IL 60085

Equal Opportunity Employer



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The Program for Research Opportunities for Medical Students 1987-88

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Further information and application forms may be obtained by writing to the
Howard Hughes Medical Institute, Research Scholars Program, 9101 Old Georgetown Road, Bethesda, Maryland 20814.

Applications invited from students in all American Medical Schools.

Your request for the application information should be received by December 31, 1986.

Final deadline for return of all application materials is January 15th, 1987.

PHD SCIENTISTS & ENGINEERS

APPLY FOR RESEARCH AWARDS

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The National Research Council in cooperation with selected federal laboratories will offer approximately 450 awards in 1987 for independent scientific research. Recipients will be free to work on problems of their own choice as guest investigators at the participating federal laboratories. Many of the 26 programs are open to experienced senior scientists as well as to recent Ph.D's. Stipends begin at \$26,350 for recent graduates and are appropriately higher for seniors. Relocation reimbursement and funds for professional travel on tenure are available, and a health insurance program is offered.

For further information and application materials please write to:
Associateship Programs (JH608/S4)

National Research Council

2101 Constitution Avenue, N.W.
Washington, D.C. 20418

Deadlines for application are
January 15, April 15 and August 15.

DIRECTOR

FLORIDA INSTITUTE OF OCEANOGRAPHY STATE UNIVERSITY SYSTEM OF FLORIDA

Applications are invited for the position of Director, Florida Institute of Oceanography (FIO), in St. Petersburg campus of the host University of South Florida. FIO is part of the State University System of Florida, and supports oceanographic research/education, including grants and contracts, at the state's universities. FIO operates the research vessels BELLOWS (72') and SUNCOASTER (110') and facilitates other research ship operations.

The candidate should have a doctorate in oceanography or a related scientific field and equivalent broad experience and demonstrated capability in administration, oceanographic research, and higher education. Firsthand knowledge of ocean-going research operations and management experience at a marine research facility is desirable.

The director serves as chief executive officer for FIO, which includes: directing the staff responsible for day-to-day operations; developing and managing an annual budget; acquiring and managing grant/contracts; scheduling vessel operations; implementing of educational programs generated by FIO and its members, and acquisition and maintenance of seagoing research equipment. It is the primary responsibility of the director to promote and encourage interinstitutional programs which benefit Florida. The director serves as a representative of the member organizations at the state, national, and international level and is responsible for public relations.

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Interested persons should send a curriculum vitae, a description of pertinent experience and a list of references by January 1, 1987 to: Search Committee Chairman, Florida Institute of Oceanography, 830 First Street South, St. Petersburg, Florida 33701.

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- Dr. Lyle Dearden: Growth in cartilage.
- Dr. James Fallon: Chemical neuroanatomy.
- Dr. Chris Gall: Chemical neuroanatomy, neural plasticity in development.
- Dr. Roland Giolli: Visuomotor system.
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- Dr. Richard Robertson: Organization of the forebrain.
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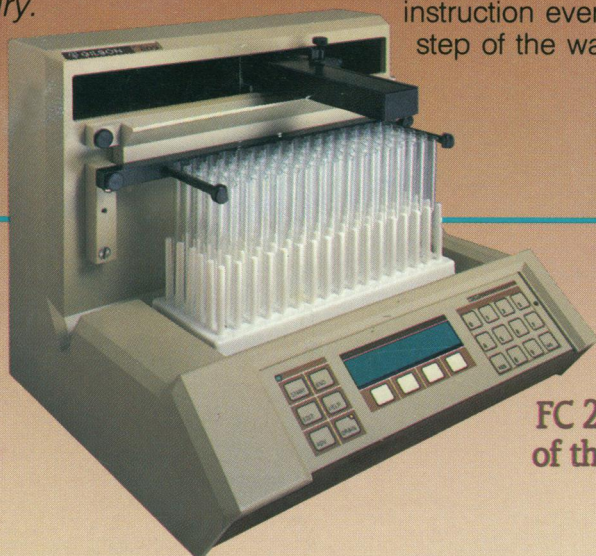
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