

mination of cross-bridge properties from macroscopic experiments by H. M. Lacker and C. S. Peskin, cardiac contraction as observed at the level of the sarcomere by J. W. Krueger and K. Tsujioka, and electrical field problems in muscle by R. S. Eisenberg.

In the volume on DNA sequence analysis there are five papers: an enumeration of unresolved problems in sequence analysis by W. M. Fitch, a report on a computer program for pattern recognition by P. H. Sellers, an analysis of probability distributions for sequence comparisons by M. S. Waterman, a consideration (subtitled "The continuing need for interaction between biologists and mathematicians") of some probabilistic and statistical problems by S. Tavaré, and a discussion of the prediction of RNA folding by M. Zuker.—K.L.

Ecdysone. From *Metabolism to Regulation of Gene Expression*. MARY BOWNES, Ed. Pergamon, New York, 1986. vi, 291 pp., illus. \$58.30. From a workshop, Edinburgh, March 1985. Published also as *Insect Biochemistry*, vol. 16, no. 1.

This volume marks the decennial of a series of semiannual workshops on ecdysone initiated at the 1975 international conference on invertebrate hormones held at Lille, France. The workshops, "planned initially on a modest European basis," have grown steadily, the participants at the 1985 workshop numbering over 100, about a third of them from the United States. In an introductory chapter Jules Hoffmann assesses progress in the field over the past ten years. Noting the importance of methodological advances to its development, he identifies and discusses in turn four principal areas of progress: the biosynthesis and metabolism of ecdysone, its mode of action at the cellular and the molecular level, its involvement in the regulation of reproduction and embryogenesis, and the phylogenetic distribution of ecdysteroids. There follow 37 papers reporting or reviewing studies in these and related areas. The next ecdysone workshop is to be held in Marburg, West Germany, in 1987.—K.L.

Books Received

Ab Initio Molecular Orbital Theory. Warren J. Hehre *et al.* Wiley-Interscience, New York, 1986. xx, 548 pp., illus. \$79.95.

Abortion, Medicine, and the Law. J. Douglas Butler and David F. Walbert, Eds. 3rd ed. Facts on File, New York, 1986. xvi, 795 pp., illus. \$40.

Active Tectonics. Geophysics Study Committee, National Research Council. National Academy Press, Washington, DC, 1986. xiv, 266 pp., illus. \$26.95. Studies in Geophysics.

Advances in Gene Technology. Molecular Biology of the Endocrine System. David Puett *et al.*, Eds. Cambridge University Press, New York, 1986. xxvi, 402 pp.,

illus. \$49.50. ICSU Short Reports, vol. 4. From a symposium, Miami, Feb. 1986.

Advances in Renal Physiology. Christopher J. Lote, Ed. Liss, New York, 1986. xiv, 334 pp., illus. \$59.50.

Aerogels. J. Fricke, Ed. Springer-Verlag, New York, 1986. viii, 205 pp., illus. \$39. Springer Proceedings in Physics, vol. 6. From a symposium, Würzburg, FRG, Sept. 1985.

Bio reduction in the Activation of Drugs. P. Alexander, J. Gielen, and A. C. Sartorelli, Eds. Pergamon, New York, 1986. vi, 122 pp., illus. \$52. From a symposium, Oxford, England, July 1985. First published as *Biochemical Pharmacology*, vol. 35, no. 1.

Brain Theory. Günther Palm and Ad Aertsen, Eds. Springer-Verlag, New York, 1986. xii, 257 pp., illus. \$42. From a meeting, Trieste, Italy, Oct. 1984.

Cadmium. E. C. Foulkes, Ed. Springer-Verlag, New York, 1986. xiv, 400 pp., illus. \$196. Handbook of Experimental Pharmacology, vol. 80.

Catalog of Teratogenic Agents. Thomas H. Shepard, 5th ed. Johns Hopkins University Press, Baltimore, 1986. xxvi, 710 pp. \$45.

Cell Biology. B. King, Ed. Allen and Unwin, Boston, 1986. xiv, 265 pp., illus. \$45; paper, \$17.95. Modern Views in Biology.

Central Plains Prehistory. Holocene Environments and Culture Change in the Republican River Basin. Waldo R. Wedel. University of Nebraska Press, Lincoln, 1986. xviii, 280 pp., illus. \$34.50.

Chemistry of Multiphase Atmospheric Systems. Wolfgang Jaeschke, Ed. Springer-Verlag, New York, 1986. xvi, 773 pp., illus. \$110. NATO Advanced Sciences Institutes Series G, vol. 6. From an institute, Corfu, Greece, Sept. 1983.

Detectors for Particle Radiation. Konrad Kleinknecht. Cambridge University Press, New York, 1986. viii, 206 pp., illus. \$44.50.

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Development, Genetics, and Psychology. Robert Plomin. Erlbaum, Hillsdale, NJ, 1986. x, 372 pp., illus. \$39.95.

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Farm Women. Work, Farm, and Family in the United States. Rachel Ann Rosenfeld. University of North Carolina Press, Chapel Hill, 1986. xiv, 354 pp., illus. \$26. Institute for Research in Social Science Monograph Series.

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New Evidence for the Pleistocene Peopling of the Americas. Alan Lyle Bryan, Ed. Center for the Study of Early Man, University of Maine, Orono, 1986. x, 368 pp., illus. Paper, \$32. Peopling of the Americas Symposia Series. From a congress, Mexico City, Oct. 1981.

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Parasitology. William C. Marquardt and Richard S. Demaree, Jr., Eds. Macmillan, New York, and Collier Macmillan, London, 1986. xii, 636 pp., illus. \$29.50.

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Strong Metal-Support Interactions. R. T. K. Baker, S. J. Tauster, and J. A. Dumesic, Eds. American Chemical Society, Washington, DC, 1986. x, 238 pp., illus. \$44.95. ACS Symposium Series, 298. From a symposium, Miami Beach, FL, April 1985.

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Paper, \$8.95. Frontiers of Science. A Spectrum Book.

Turbulence and Diffusion in Stable Environments. J. C. R. Hunt, Ed. Clarendon (Oxford University Press), New York, 1985. xvi, 319 pp., illus. \$49. Institute of Mathematics and its Applications Conference Series, new series, no. 4. From a conference, Cambridge, England, March 1983.

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Using Computers. The Human Factors of Information Systems. Raymond S. Nickerson. MIT Press, Cambridge, MA, 1986. xvi, 436 pp. \$22.50. A Bradford Book.

Vaccinating against Brain Syndromes. The Campaign against Measles and Rubella. Ernest M. Gruenberg, Carol Lewis, and Stephen E. Goldston, Eds. Oxford University Press, New York, 1986. xiv, 167 pp., illus. \$24.95. Monographs in Epidemiology and Biostatistics, vol. 9.

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Visual Order. The Nature and Development of Pictorial Representation. N. H. Freeman and M. V. Cox, Eds. Cambridge University Press, New York, 1985. xvi, 395 pp., illus. \$49.50.

Woman Abuse. Facts Replacing Myths. Lewis Okun. State University of New York Press, Albany, 1986. xxiv, 298 pp. \$44.50; paper, \$16.95. SUNY Series in Transpersonal and Humanistic Psychology.

Women Scientists from Antiquity to the Present: An Index. An International Reference Listing and Biographical Directory. . . . Caroline L. Herzenberg. Locust Hill, West Cornwall, CT, 1986. xl, 200 pp. \$30.

ROSENSTIEL AWARD IN OCEANOGRAPHIC SCIENCE

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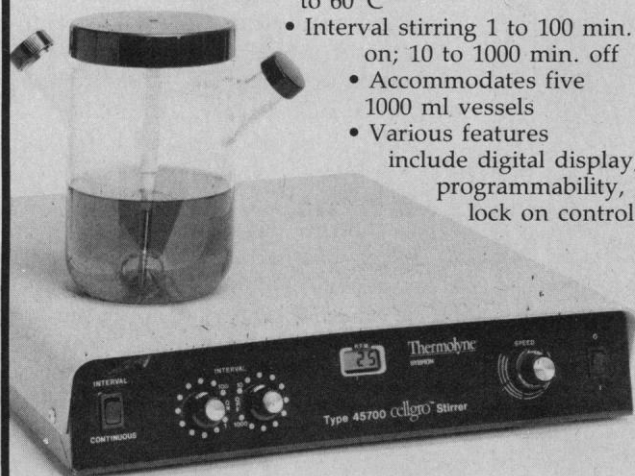
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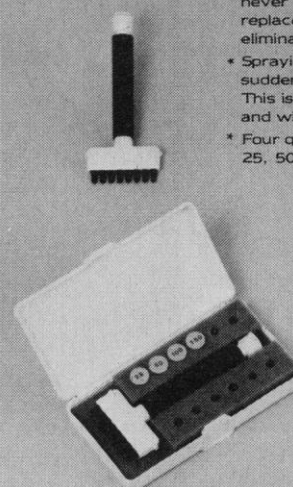


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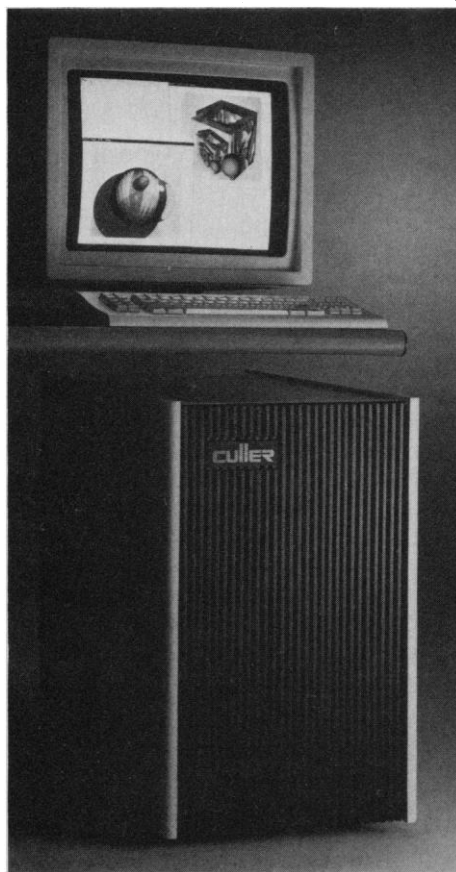
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BOTANIST; ZOOLOGIST; ECOLOGIST. The Nature Conservancy and the Kansas Biological Survey seek candidates for three positions with the Kansas Natural Heritage Program starting in October 1986 in Lawrence, Kansas. All positions responsible for building a map atlas and computer database on rare plants, animals, and communities in Kansas. M.S. or B.S. with experience required; knowledge of the biota of Kansas strongly preferred. Salary range: \$18,000 to \$20,000, plus benefits. Send résumé by 5 September 1986 to: **S. Rodman, The Nature Conservancy, 1800 North Kent Street, Arlington, VA 22209.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR. Department of Nutrition, Rutgers University, tenure-track position. Recent Ph.D. in nutrition with strong background in the basic sciences to develop independent research program in nutrition and metabolism and participate in teaching of general and specialized nutrition and undergraduate biology courses. Postdoctoral training and teaching experience preferred. For detailed information, write by 1 October 1986 to: **Search Committee, Department of Nutrition, Rutgers University, New Brunswick, NJ 08903.** *An Equal Opportunity Employer.*

ASSISTANT PROFESSOR PHARMACOLOGY TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER

The Department of Pharmacology of the Texas Tech University Health Sciences Center in Lubbock is seeking candidates for a tenure-track position at the assistant professor rank. The position is available 1 September 1986. Qualifications include the Ph.D. degree, preferably in pharmacology or a related biomedical science, with at least 2 years of postdoctoral training. Candidates will be expected to conduct an active, independent, and productive research program and to be persistent in seeking and obtaining research funding. Candidates with interests in cardiovascular, autonomic, endocrine, biochemical, amino acid metabolism, calcium, or bone research will be given preference, but outstanding candidates with research expertise in other areas will be considered. Applications should include curriculum vitae and three names for reference purposes and should be sent prior to 8 September 1986 to: **Dr. Alexander D. Kenny, Chairman, Department of Pharmacology, Texas Tech University Health Sciences Center, Lubbock, Texas 79430.** *An Equal Opportunity/Affirmative Action Employer.*

The Human Gene Mapping Library in New Haven, Connecticut, seeks an individual with a Ph.D. in Genetics with a strong background in computers to fill an immediate full-time opening as an **ASSOCIATE** in the Howard Hughes Medical Institute. This is an excellent opportunity for a self-motivated person who can take on a leadership role. The position involves close collaboration with professors at Yale University working in human genetics and with other investigators in this field in the United States and abroad. A background in research concerned with restriction fragment length polymorphisms would be useful. Duties will include: reconciliation of physical and Mendelian human linkage groups; investigation into and retrieval of mapping information of human genes; compilation of associated data; and ongoing communication of results to researchers.

Please send curriculum vitae and letters of inquiry to: **Iva H. Cohen, Operations Manager, Howard Hughes Medical Institute, Human Gene Mapping Library, 25 Science Park, New Haven, CT 06511.** *An Equal Opportunity Employer.*

CHAIRMAN OF OPHTHALMOLOGY Harvard Medical School Massachusetts Eye and Ear Infirmary

Harvard Medical School and Massachusetts Eye and Ear Infirmary are seeking a professor and chairman of the Department of Ophthalmology and chief of the Ophthalmology Service.

Among the chairman's major responsibilities are the care of patients; instruction and supervision of students, residents, and fellows; and the development of basic and clinical research programs.

Please send curriculum vitae to: **The Chairman of the Ad Hoc Committee To Search for a Professor of Ophthalmology, Alexander Leaf, M.D., Department of Preventive Medicine, Massachusetts General Hospital, Boston, MA 02114.**

Massachusetts Eye and Ear Infirmary, 243 Charles Street, Boston, MA 02114. *An Equal Opportunity Employer.*

Immunochemistry

CYTOGEN Corporation has an outstanding opportunity for an energetic individual to join our multidisciplinary research team comprised of scientists who are exploring and utilizing monoclonal antibody conjugates and their associated chemistries.

We require a PhD with 2-5 years experience in the following areas:

- *Antibody purification, assay and modification*
- *In vitro use of antibody conjugates*
- *Antibody conjugation to novel organic molecules*

This position will involve benchwork as well as supervisory duties.

CYTOGEN Corporation is a rapidly growing biotechnology firm located in Princeton, New Jersey within commuting distance of both the New York and Philadelphia metropolitan areas. We offer a competitive salary and benefits program in an invigorating and supportive scientific atmosphere.

Qualified applicants are invited to submit a resume including salary history to: Department P, CYTOGEN Corporation, 201 College Road East, Princeton, New Jersey 08540.
An equal opportunity employer m/f.

CYTOGEN
CORPORATION

Risk Assessment Analyst (Toxicology)

Mobay Corporation, one of the largest manufacturers of agricultural and other petrochemical products, has an excellent position available at the corporate toxicology facility located near Kansas City.

Qualified candidates should possess a PhD in Toxicology or a related science and several years of experience in risk assessment or with toxicology studies. Additional experience with computer based risk assessment models and/or ABT certification is preferred.

Responsibilities include: review and evaluation of toxicology data for risk exposure to humans and wildlife, preparation of cautionary statements for product labels and MSDS's, field and handle inquiries from external sources regarding toxicity of pesticides.

Position offers a competitive salary and comprehensive paid benefits package including complete relocation. Send curriculum vitae and salary history to: R.M. Dischner, P.O. Box 4913, Kansas City, Mo. 64120.



**Mobay
Corporation**

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THE SCIENCE RECRUITMENT "FOUR DAY CLOSE"

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

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BIOMETRICIAN/ BIOSTATISTICIAN

Battelle, Pacific Northwest Laboratories has an opening for a senior level biometrician/biostatistician for its Marine Research Laboratory in Sequim, Washington.

Applicants must have the ability to initiate statistical research in environmental sampling and assessment methodology, population dynamics and parameter estimation. Applicants should possess a good working knowledge of applied and mathematical statistics as they relate to environmental issues. Preference will be given to individuals with demonstrated experience in both statistics and fisheries biology, toxicology or marine science. The successful candidate will have strong academic credentials in biostatistics, experience in designing and participating in interdisciplinary research, and a proven background in technical writing. Marketing of research capabilities to clients, proposal preparation and the supervision of project staff are additional responsibilities.

U.S. citizenship required.

Interested candidates with a Ph.D., and at least five years' experience are invited to submit their curriculum vitae, a brief statement of research interests and the names of three references to:

Dr. John A. Strand, Manager, Marine Sciences Section, Pacific Northwest Laboratories, Battelle, Marine Research Laboratory, 439 West Sequim Bay Road, Sequim Washington 98382. An Equal Opportunity Employer M/F.



Battelle

Pacific Northwest Laboratories

PHYTOTEC, sa, of Gembloux, Belgium invites application for:

DIRECTOR OF RESEARCH

Phytotec, a plant biotechnology laboratory and production company was recently formed as a joint venture of NPI, Salt Lake City, Utah; CDAB, a Belgian venture capital group; Vista Ventures, Ltd., a British venture capital group; and SES, a Belgian seed company. Phytotec became operational through acquisition of Biagral, a tissue culture production and research facility near Brussels, Belgium.

The Director of Research for Phytotec will serve as the chief scientist of the Corporation. The individual selected for the position must have the professional standing to represent the Corporation as a high technology enterprise, to help set standards of excellence in technical matters, to lead the technical staff in the preparation of research plans and assist in the organization and management of the research program. The incumbent would be expected to be a recognized leader in a basic biological research area and be familiar with methods and opportunities for solving agricultural problems with plant biotechnology products. Effective communication, in English as well as appropriate languages of Europe, is essential to fulfill expected objectives for management and technology transfer.

Applicants should meet the following minimum criteria:

1. **Education.** An advanced degree (Ph.D. or equivalent) in a relevant scientific discipline to plant biotechnology. Additional education in areas of conventional agriculture is desirable.
2. **Leadership.** Professional service in the scientific community sufficient to be considered as an international leader in the discipline(s).
3. **Experience.** Employment in more than one institution in a senior or responsible position that has afforded opportunities to gain a perspective of management of scientific staff and resources (not less than 10 years). Familiarity with European plant agriculture and its problems and opportunities is highly desirable.
4. **Personality.** Candidates must have demonstrated skills in communication, effective interpersonal relationships, organizational management and personnel supervision. Generally expected is a positive outlook and enthusiasm for application of science to agricultural products (and not science for the sake of science alone).

Applicants should provide a C.V. and detailed description of management and leadership experience plus names, addresses and phone number of five (5) references who could be contacted. Mail applications to **Dr. C.M. McKell, Vice President, Research, NPI, 417 Wakara Way, University Research Park, Salt Lake City, Utah 84108, Tel. (801) 582-0144, Tlx. 820832 NPI SLC.**

Regional Medical Associate

Pharmaceutical Marketing

An expansion opportunity has created an opening in the **Midwest Region** for a Regional Medical Associate, to be headquartered in Memphis, TN, to combine scientific expertise and marketing skills. Responsibilities are to establish effective relationships within key medical institutions, providing scientific liaison and in-depth information essential to appropriate use of SK & F's products. Will also have training responsibility at the Representative, Medical Staff, and Pharmacy levels. 50% travel.

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

In addition to an independent work environment where personal and professional growth are a way of life, we offer an outstanding compensation/benefits package geared to today's market. Please send resume and current earnings to:

BOX 143
SCIENCE

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MOLECULAR BIOLOGY SENIOR SCIENTISTS

Applied bioTechnology is a growing company specializing in:

- ★ *genetically engineered vaccines for the veterinary and human markets*
- ★ *novel products for cancer diagnostics and therapeutics based on oncogene technology*

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 oncogenes is highly desirable.

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

An Equal Opportunity Employer

Applied bioTechnology, Inc.

IMMUNOLOGISTS/IMMUNOCHEMISTS/ TUMOR AND CELL BIOLOGISTS

CENTER FOR MOLECULAR MEDICINE AND IMMUNOLOGY

The **CENTER FOR MOLECULAR MEDICINE AND IMMUNOLOGY**, a specialized cancer research and treatment center, is recruiting for **senior and junior researchers**. The Center is devoted to basic and applied multidisciplinary research aimed at improving the management and control of cancer and allied diseases. Potential candidates should be experienced in biochemical, genetic, and molecular biological techniques to study problems in the areas of molecular immunology, immunobiology, and molecular genetics. Special consideration will be given to those individuals with interest in tumor immunity, immunochimistry, tumor imaging and therapy, tumor biology, and tumor genetics. Excellent laboratory facilities are available to successful candidates expected to develop independent and vigorous research programs. Applicants must hold a Ph.D. or M.D. degree and have demonstrated excellence in research. The levels of appointment and salary are commensurate with qualifications and experience. Junior research candidates will be expected to indicate evidence of their potential by a publication record appropriate to their experience, as well as letters of recommendation. Senior research candidates must show evidence of a strong research accomplishment and grant support. **Postdoctoral candidates** are invited to apply.

The Center is located on the Newark campus of the University of Medicine and Dentistry of New Jersey (UMDNJ) and is closely affiliated with several of UMDNJ's clinical research and educational programs. In close proximity are excellent opportunities for educational, research, and cultural exchange among the many outstanding institutions within the greater New Jersey-New York Metropolitan area. Ample housing exists in several adjacent communities and within short commuting distances of both the Center and New York City.

Applications, to include curriculum vitae, bibliography, a statement of career and research goals and the names of three references should be sent to:

David M. Goldenberg, Sc.D., M.D.
President
Center for Molecular Medicine and Immunology
1 Bruce Street, Newark, New Jersey 07103

An Equal Opportunity Employer

The Department of Biology at Memphis State University invites applications and nominations for an endowed **CHAIR OF MOLECULAR BIOLOGY**. Applicants are being sought for the full professor level. The candidate should be a recognized scholar with a record of significant achievements in molecular biology research. Expertise should include the application of recombinant DNA techniques to problems in viral, microbial, animal or plant molecular biology. A Ph.D. in microbiology, genetics, biochemistry, molecular biology, immunology or related field is required.

The appointee will be expected to be a catalyst in developing a center of excellence in molecular biology, to supervise and contribute to the education of graduate students and postdoctoral associates, and to interact with other research programs. Considerable funds are available to help equip and operate a laboratory. Appointment effective as negotiated.

Applications should include curriculum vitae, statement of research interests and the names of three references. Direct applications and inquiries to **James F. Payne, Molecular Biology Search Committee, Biology Department, Memphis State University, Memphis, TN 38152**. Applications will be accepted until a suitable candidate is found.

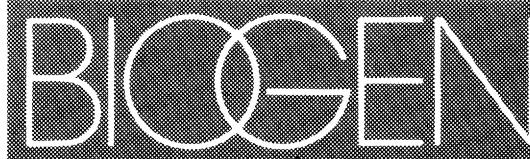
SCIENTISTS

Biogen is an international biotechnology company engaged in the development of commercial products through the use of advanced biological sciences, particularly, recombinant DNA and advanced mutational techniques.

Positions are currently available in both our Geneva and Cambridge laboratories for scientists skilled in the cell biology and biochemistry of immunology and inflammation. You will join a research effort directed at the study of cellular mechanisms underlying immune responsiveness and the regulation of those responses by lymphokines and other molecules. Successful candidates will join a multidisciplinary team of scientists developing new recombinant proteins for a variety of therapeutic applications.

Interested applicants should have a Ph.D. and at least two years of postdoctoral experience in immunology, cell biology or biochemistry. CV's should include a list of publications and three professional references.

Biogen offers an excellent compensation and benefits package. Please forward your CV to the **Manager of Human Resources, Biogen, Dept. S/20, 14 Cambridge Center, Cambridge, MA 02142**. An equal opportunity employer.

The Biogen logo consists of the word "BIOGEN" in a stylized, outlined font. The letters are white and set against a dark, textured rectangular background.

PHARMACOLOGY PRINCIPAL STAFF SCIENTIST

Miles Institute for Preclinical Pharmacology (New Haven, CT) has an opportunity for a Pharmacologist, PhD or MD with 12 years of experience in cardiovascular, CNS or general pharmacology.

The individual is expected to be familiar with government regulations, have extensive connections with academic scientists in the USA and have an established scientific reputation. Knowledge of German will be an asset.

The selected candidate will have an opportunity to conduct his/her own research program as well as to interact with other scientists at Miles, Bayer AG or various academic institutions. The major interests of the Institute include development of Ca antagonists, and drugs affecting metabolism.

We offer competitive salary, benefits and relocation package. Qualified candidates are invited to send their resume or C.V. including bibliography to: **Manager of Placement & Relocation, Miles Pharmaceuticals, Inc., 400 Morgan Lane, West Haven, CT 06516**.

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The Miles logo features the word "MILES" in a bold, sans-serif font. The letters are white and set against a dark, stylized background that resembles a mountain range or a series of peaks.

TOXICOLOGY PHARMACEUTICAL RESEARCH

Continued expansion at the Warner-Lambert/Parke-Davis Pharmaceutical Research Division has created immediate opportunities for several types of toxicologists to join a dynamic team of scientists in our Pathology and Experimental Toxicology Department. These opportunities are located in our new 90,000 square foot Toxicology laboratory in Ann Arbor, adjacent to the University of Michigan.

General Toxicologist(s)

The responsibilities for these positions include the planning, design and execution of a variety of toxicity studies designed for safety evaluation in preclinical studies. Duties also will include summarization and interpretation of toxicology preclinical data, supervision of technical staff and representation of the department on Research Division planning/project teams.

Requirements for these positions include a Ph.D in Toxicology or related field and 0-2 years industry experience.

Veterinarian

The responsibilities of this position are the same as for the general toxicologist with the addition of laboratory animal veterinary responsibilities.

Requirements include a D.V.M. degree and a minimum of one year postdoctoral experience or equivalent in laboratory animal medicine.

Genetic Toxicologist

The responsibilities of this position include supervision of the scientific aspects of drugs under development using the current testing battery, and performing investigative studies to assess underlying mechanisms for genotoxicity and improvements to testing methodology.

Requirements include a Ph.D in Toxicology or related field, experience in genetic toxicology testing and/or research, knowledge of cytogenetics helpful, excellent written and oral skills.

Reproductive Toxicologist

The responsibilities of this position include the design, execution and analysis of studies to determine influence of new drug candidates on the embryo and fetus. Supervision of technical staff is an integral part of the positions-will work both independently and as a part of project/planning teams.

Requirements include a Ph.D in Reproductive Biology or closely allied field (anatomy, embryology), 1-3 years postdoctoral experience in reproductive toxicology, knowledge of GLPs, experience in maintenance of animal colonies, embryo culture techniques, and in animal care and handling.

Regulatory Toxicologist

The responsibilities of this position include the supervision of the compilation and presentation of verbal and written communiques associated with requirements of domestic and international regulatory affairs and GLPs; participation in department research as study director for in-house research and monitor of studies contracted outside; participation on Research Division project/planning teams; and the preparation of department position documents.

Requirements include a Ph.D in Toxicology or related field and 0-2 years experience in regulatory processes.

Biochemical Toxicologist

The responsibilities of this position include the development and implementation of advanced methods in clinical chemistry for the evaluation of drug safety in animal toxicity studies or Phase I clinical trials; and establishing methods to evaluate possible drug interference in routine assays.

Requirements include a Ph.D in Clinical Chemistry or related field; experience in clinical chemistry instrumentation, statistics, and biochemical aspects of cell culture system: 1-2 years postdoctoral experience desirable.

We invite qualified applicants to consider a position at WL with excellent compensation, benefits, professional development, and living and working environment.

Please send resume, salary requirements, and reference list-indicate for which position applying-submit applications by August 22 to:

Ms. M. Wolin

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LAMBERT**

Warner-Lambert/Parke-Davis
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An Equal Opportunity Employer M/F/H

POSITIONS OPEN

CHAIRPERSON DEPARTMENT OF PATHOLOGY GEORGETOWN UNIVERSITY MEDICAL CENTER

The Georgetown University Medical Center is seeking applicants for the position of **PROFESSOR** and **CHAIRPERSON** of the Department of Pathology. The successful candidate will be in charge of the academic programs associated with the department including teaching medical, dental, and graduate students and residents. He/she will also be responsible for the pathological services of the Georgetown University Hospital including the surgical pathology service, autopsy service, and other related activities. Although the research field is open, individuals with a strong program in cancer biology are encouraged to apply. Candidates must have a distinguished record of scholarship and professional achievement as evidenced by publications and grant awards, and proven leadership and administrative abilities. Applicants should include a complete curriculum vitae and names and addresses of at least five references. Please send applications to:

Martin Dym, Ph.D., Chairman
Department of Anatomy and Cell Biology
Georgetown University Medical Center
3900 Reservoir Road, NW
Washington, DC 20007

An Equal Opportunity/Affirmative Action Employer.

DEPUTY DIRECTOR OFFICE OF ENVIRONMENTAL PROCESSES AND EFFECTS RESEARCH WASHINGTON, DC \$61,296 TO \$68,700

U.S. Environmental Protection Agency (EPA) is seeking highly qualified candidates for the position of deputy director, Office of Environmental Processes and Effects Research (OEPR). OEPR is responsible for the development of scientific methods and data necessary to understand, predict, and manage the entry, movement, and fate of pollutant effects on the food chain, as well as their effects on nonhuman organisms and ecosystems. The deputy director is responsible with the director for an interdisciplinary Washington staff and support to six major EPA environmental research laboratories.

To meet the requirements of the position, applicants must have research management experience and a bachelor's or higher degree in the life sciences and must meet the **technical and executive qualifications** described in the vacancy announcement. Telephone or write for a copy of the vacancy announcement to: **Edna Morse, Environmental Protection Agency, SES and Executive Resources Unit, PM-224, 401 M Street, SW, Washington, DC 20460. The telephone number is 202-382-3328.**

Applications must be postmarked by 12 September 1986.

EPA is an Equal Employment Opportunity Employer

DIRECTOR—IMAGING RESEARCH CENTER for Department of Radiology. Responsible for directing and developing research efforts in PET, magnetic resonance imaging and spectroscopy, nuclear medicine, and radiology. M.D. with training in radiology/nuclear medicine or Ph.D. in physics/chemistry required. Send curriculum vitae to: **Albert Moss, M.D., Radiology SB-05, University of Washington, Seattle, WA 98195.**

FACULTY OPENING IN EXPERIMENTAL ASTROPHYSICS

The University of California at Berkeley

Pending budgetary approval, The Department of Physics seeks to fill a faculty position in experimental astrophysics at the **assistant professor** or tenured **associate professor** level, effective 1 July 1987, with at least several years of postdoctoral experience required. Applicants in all subfields of astrophysics will be considered, but emphasis in the search is on experience in infrared instrumentation, and research interests likely to benefit from the Keck telescope. Applicants should send curriculum vitae, bibliography, statement of research interests, and the names of three references to: **Professor John H. Reynolds, Chairman, Department of Physics, University of California, Berkeley, CA 94720, before 1 October 1986. The University of California is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

XYTRONYX, INC.

A Biotechnology Development Company

The company has recently relocated from Chicago to the San Diego area. We are now hiring scientific personnel with the following qualifications:

Director: Molecular biology, Ph.D. or equivalent, and 5 years of experience

Molecular Biologist: Ph.D. or equivalent and 2 years of experience

Director: Protein chemistry and hybridoma laboratory, Ph.D. or equivalent, and 3 to 5 years of experience.

The company is competitive in health care and fringe benefits. In addition there are other excellent incentives for company employees.

Please send résumés and two letters of reference to:

Director of Personnel
Xytronyx, Inc.
6555 Nancy Ridge Drive
Suite 200
San Diego, CA 92121

A FACULTY POSITION in the Program in Biostatistics Department of Biomedical and Environmental Health Sciences School of Public Health University of California, Berkeley 94720

A tenure-track position in biostatistics will be available beginning fall 1987 at the assistant professor level. Applicants should possess a strong background in both theoretical and applied biostatistics and an ability to engage in in-depth research. Duties will include developing and teaching graduate level courses, in addition to directing graduate student research. A Ph.D. in biostatistics or related field is required. Applications must be submitted before 15 December 1986. Please send curriculum vitae, list of publications, and names and addresses of five individuals who may be contacted for reference to:

Steve Selvin, Chairman, Search Committee
Department of Biomedical
and Environmental Health Sciences
School of Public Health
University of California, Berkeley
Berkeley, CA 94720

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

MARINE RESEARCH SCIENTIST

The West Indies Laboratory (WIL) of Fairleigh Dickinson University (FDU) is seeking a marine **research scientist/scientific coordinator** for its Undersea Research Program sponsored by the Office of Undersea Research of NOAA. This new program, building on the Hydrolab Program, which operated at WIL from 1978 to 1985, will direct the diving scientific activities associated with a new saturation diving facility scheduled to become operational in mid-1987. The scientist will work closely with the principal investigator on the design and implementation of the science program, will have major responsibility in the preparation of proposals, and will conduct a vigorous research effort. Working with the operations director, the scientist will plan and coordinate the activities of diving scientists in the new facility and will be a member of the Science Advisory Panel of the NOAA Office of Undersea Research.

The position, starting 1 January 1987, is nontenure track with the academic rank of assistant professor at FDU. Emphasis will be placed on proven ability and productivity in marine research, administrative skills, and Caribbean/tropical research experience. The applicant must have the Ph.D. degree and be a certified scuba diver, skilled in the application of diving techniques to marine science.

Send letter of application, curriculum vitae, and names of three references before 15 September 1986 to:

Dr. John C. Ogden, Principal Investigator
National Undersea Research Program—WIL
West Indies Laboratory
Teague Bay, Christiansted, St. Croix
U.S. Virgin Islands 00820

Affirmative Action/Equal Opportunity Employer.

DIRECTOR

MOLECULAR BIOLOGY CENTER WAYNE STATE UNIVERSITY

Wayne State University is seeking a director of its newly formed Molecular Biology Center (MBC). The purpose of the Center is to enhance and to extend the University's research productivity in areas of molecular biology. The University is especially interested in enhancing areas that are of importance to industries in the State of Michigan.

The MBC's mission is interdisciplinary in scope and involves programs in the basic science departments of the School of Medicine, departments of Biological Sciences and Chemistry in the College of Liberal Arts, and certain clinical departments in the School of Medicine. A primary goal of the Center is improvement of human health with a view toward biotechnology implementation. Four broad areas of research are emphasized: gene structure and function, organization of the human genome, synthesis and characterization of new products, and protein structure and function. Funds are available within the Center to employ research professors, research scientists, postdoctoral fellows, graduate research assistants and research support personnel. Furthermore, new programs consistent with the objectives of the Center may be developed under the leadership of the Director.

The Director of the MBC will report to the Vice President for Research at Wayne State University and will have responsibility for:

1. Recruiting new senior research staff, postdoctoral fellows, graduate students, and research support personnel to support the MBC's research programs.
2. Managing the MBC's budget consisting of \$2.4 million per year in State funds plus funds obtained through industrial, federal, and private grants and contracts under the leadership of the director.
3. Appointment of advisory committees with university and industrial representation.
4. Managing office and research support facilities for the technical activities of the MBC.
5. Disseminating information about the progress and accomplishments of the MBC.
6. Working with the Metropolitan Center for High Technology, a University-affiliated incubation center for new business ventures and expansion of existing business in advanced technology growth fields.
7. Coordinating the MBC's activity with state agencies responsible for advancing economic development in technical areas.

Qualifications

1. A proven record of accomplishments as a molecular biology researcher and as a research manager.
2. Ph.D. degree and considerable experience in an appropriate area related to the goals of the Molecular Biology Center.
3. Ability to work effectively with persons of diverse interests and backgrounds in setting goals and implementing programs.
4. Proven organizational skills required for developing interdisciplinary programs.
5. Ability to identify public and private research funding opportunities and to assist in obtaining such support for research teams in the MBC.
6. Prior experience or contact with industrial firms involved with the products of molecular biological research would be of value.

It is presumed that the successful candidate will be appointed to the faculty of Wayne State University in an academic department appropriate to his/her qualifications and experience. The salary is fully competitive and negotiable.

Letters of nomination or application with résumés should be sent to:

Dr. Garrett T. Heberlein
Vice President for Research and
Dean of the Graduate School
Wayne State University
1072 Mackenzie Hall
Detroit, MI 48202

Wayne State University is an Affirmative Action Equal Opportunity Employer.



Wayne State University

SENIOR SCIENCE ADVISOR
ALCOHOL, DRUG ABUSE, AND
MENTAL HEALTH ADMINISTRATION
(ADAMHA)

The Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) is seeking candidates for a 1- to 2-year Intergovernmental Personnel Act (IPA) assignment to fill the newly established position of Senior Science Advisor (and Director, Office of Science). The individual selected for this assignment would be responsible for advising the Administrator, ADAMHA, on science policies for the agency's intramural and extramural research programs, and he/she would also direct the activities and staff of ADAMHA's newly established Office of Science.

The ideal candidate would be a scientist, preferably with medical training, who is well versed in alcohol, drug abuse, and mental health research and is a recognized leader in this field. Since this is an IPA assignment, candidates must be permanent career employees of institutions of higher education, State and local governments, or certain nonprofit organizations, and must be interested in a temporary assignment with the Federal government while retaining their status with, and the benefits currently provided by, their permanent employer. Specific cost-sharing arrangements for this IPA assignment would be negotiated between ADAMHA and the candidate's non-Federal employer.

Interested persons may contact Ms. Pat Bransford, (301) 443-5030, for more information. Nominations and/or the resumes of interested candidates should be submitted to Ms. Bransford, Division of Personnel Management, Room 15C-26, 5600 Fishers Lane, Rockville, Maryland 20857.

An Equal Opportunity Employer

RESEARCH SCIENTIST

Anticancer Drug Evaluation

Rapidly expanding **Adria Laboratories** has a position of high visibility and responsibility for an experienced scientist who excels in the laboratory aspects of screening and evaluating anticancer drugs using in vitro and in vivo methods.

Qualified candidates will have a PhD in Biochemistry or Immunology, at least 2 years' postdoctoral experience in tumor biology, and a strong orientation towards biotechnology.

Adria offers superb compensation and benefits, a diverse and attractive living environment in Columbus, Ohio, and a chance to participate in the enriched professional atmosphere associated with our rapid growth. Forward resume and salary requirements to: **Adria Laboratories, Employment, Box JWK, P.O. Box 16529, Columbus, Ohio 43216.** We actively seek and encourage minorities and females to apply.



ADRIA LABORATORIES

CAL BIO

STAFF SCIENTISTS RESEARCH ASSOCIATES

California Biotechnology, Inc. is a rapidly growing biotechnology and drug delivery company engaged in the development of health care products. We have some exceptional opportunities researching the role of growth factors and growth inhibitors in the process of angiogenesis.

Qualified candidates will have a B.S./M.S. or Ph.D. and relevant experience in Protein Chemistry, Cell Biology, or Molecular Biology.

We offer a stimulating research environment with a competitive compensation and benefits package. For consideration please forward curriculum vitae and names of three references in confidence to:

**Human Resources
Dept. MF-AG
California Biotechnology, Inc.
2450 Bayshore Parkway
Mountain View, CA 94043**

EOE

RESEARCH ASSOCIATE (BS/MS)

Biophysics/Biophysical Chemistry/Computational Chemistry

The Pharmaceutical Research and Development Division of The Upjohn Company, located in Kalamazoo, Michigan has an opening in its Computational Chemistry Department involving research in developing and applying computational methods for investigating macromolecular structure and dynamics, and their relation to biological functions and receptor-ligand interactions. Techniques used in these studies include numerical methods such as energy minimization and dynamics simulations, as well as computer graphics.

The responsibilities of the incumbent include: carrying out computational experiments for modeling protein structure and function and investigating receptor-ligand interactions; assisting the interpretation of results from such calculations; maintaining and improving computer programs used in numerical and graphics processing. The successful candidate will have a B.S. or an M.S. degree in physical chemistry, biophysical chemistry, or physics, with a strong background in physics and mathematics, and in FORTRAN programming. Experience in computer graphics will be helpful.

Kalamazoo is a mid-sized Southwestern Michigan community offering an excellent mix of cultural/recreational opportunities including lakes, nearby colleges, and a four-season climate. The Upjohn Company offers an excellent salary, benefits, and relocation plan.

For confidential consideration, please call from outside of Michigan toll free **1-800-253-8600 extension 3-6767**; or inside Michigan collect **(616) 323-6767** to request a specialized employment application be sent to you immediately. Please refer to **Ad Number 19342B** when calling.



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POSITIONS OPEN

FACULTY POSITION IN THE DEPARTMENT OF BIOMEDICAL AND ENVIRONMENTAL HEALTH SCIENCES SCHOOL OF PUBLIC HEALTH UNIVERSITY OF CALIFORNIA, BERKELEY

A tenure-track position in epidemiology at the assistant, associate, or full professor level (depending on qualifications) is available beginning in the fall semester 1987. The applicant should have a doctoral degree in an appropriate health or biomedical science and expertise in epidemiological research with emphasis on infectious diseases. Duties include developing and teaching courses in infectious disease epidemiology and supervising graduate student research.

Applications will be received for consideration through 15 October 1986, and should include a statement of interest, curriculum vitae, bibliography, and names and addresses of five professional or academic persons who can be asked for letters of reference. Send applications or requests for further information to:

Dr. James L. Hardy
Search Committee Chairman
Department of Biomedical
and Environmental Health Sciences
School of Public Health
University of California
Berkeley, CA 94720

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

FACULTY POSITION IN PROTEIN CHEMISTRY DUKE UNIVERSITY MEDICAL CENTER

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

Equal Opportunity Employer.

ST. GEORGE'S UNIVERSITY SCHOOL OF MEDICINE has openings for experienced lecturers in:

PHARMACOLOGY/PHYSIOLOGY

Prior medical school teaching experience is required. Initial appointments are for 1 year, with renewals possible for periods of 1 to 3 years.

Applications will be considered for candidates anticipating a sabbatical leave, or from recent retirees in good health. Level of appointment will depend on the background of applicants. Send curriculum vitae and teaching references to:

Dr. David Brown
Dean of Pre-Clinical Faculty
St. George's University, School of Medicine
c/o Foreign Medical School Services Corp.
One East Main Street
Bay Shore, New York 11706

PATHOLOGY: Tenure-track faculty position available for M.D. or Ph.D. with active research program in molecular aspects of tumor biology or tumor immunology. Position and salary commensurate with experience. Participate in teaching of tumor biology to medical students and in training of graduate students. Excellent protein chemistry, tissue culture, flow cytometry, and animal facilities available. Send résumé to: **Dr. Raymond M. Welsh, Department of Pathology, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA 01605.**

An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

MOLECULAR BIOLOGIST MEHARRY MEDICAL COLLEGE

The Division of Biomedical Sciences at Meharry Medical College invites applications for a tenure-track molecular biologist position. This individual will join a group of cell and molecular biologists and biochemists who are investigating numerous biomedical problems including tropical diseases. This department has highly funded faculty and a NIH training grant. The candidates should be committed to developing strong, independent, fundable research programs and to participating in medical and graduate teaching. Applicants should send curriculum vitae, a brief statement of research interests, and the names of three references to:

George C. Hill, Ph.D.
Division of Biomedical Sciences
Meharry Medical College
1005 D. B. Todd, Jr. Boulevard
Nashville, Tennessee 37208
Telephone: 615-327-6193

Meharry Medical College is an Equal Opportunity/Affirmative Action Employer

NEUROSCIENCE POSTDOCTORAL RESEARCH ASSOCIATE

Position available immediately in neuroscience research laboratory conducting multidisciplinary studies of the neuroanatomical and neurohistochemical basis of learning and memory in the normal and aged rhesus monkey as a model for understanding normal, pathological, and age-related memory function in humans. Research activities cover neuroanatomy, neurosurgery, neuroimmunology, immunohistochemistry, receptor binding, and neurobehavioral methodologies applied to monkeys. A Ph.D. or M.D. and relevant research experience required. Possibility of a 3-year NIH training grant or research grant support. Contact: **Dr. D. L. Rosen or Dr. M. B. Moss, Department of Anatomy, Boston University Medical Center, 80 East Concord Street, Boston, MA 02118.** *An Equal Opportunity Employer, M/F.*



PHARMACOLOGIST/PHYSIOLOGIST

Nova Pharmaceutical Corporation, a unique drug research and development organization located in Baltimore, has an immediate opening for a pharmacologist/physiologist with a minimum of 2 years of postdoctoral experience. The ideal candidate would have experience relevant to the study of the physiological and pathological functions of bradykinin. Experience with inflammation mechanisms and in vivo models useful for studying analgesic/anti-inflammatory drugs would be especially desirable. Additional experience with in vitro receptor binding and bioassay techniques would be very helpful.

Nova occupies new facilities at the Francis Scott Key Medical Center in Baltimore, and has strong intracampus links with the Johns Hopkins University, the National Institute for Drug Abuse and the National Institute of Aging. Nova has a full complement of chemical, biochemical, and pharmacological support personnel.

Nova offers competitive salaries and an excellent benefits package. Interested individuals should send curriculum vitae to:

Mrs. Lydia K. Battaglia
NOVA PHARMACEUTICAL CORPORATION
5210 Eastern Avenue
Baltimore, Maryland 21224-2788
An Equal Opportunity Employer

POSTDOCTORAL OR RESEARCH ASSOCIATE position available immediately to study problems related to genetic and malignant diseases of children. Experience in molecular biology preferred. Those with knowledge of glycoprotein purification and structure considered. Send curriculum vitae and names of three references to: **Dr. M. C. Glick, University of Pennsylvania Medical School, The Children's Hospital of Philadelphia, Philadelphia, PA 19104.**

POSITIONS OPEN

PHYSIOLOGIST

The West Virginia School of Osteopathic Medicine (WVSOM) invites applications for a tenure-track appointment at the assistant professor level. Applicants should have a Ph.D. in physiology with background in systems and expertise in the cardiovascular system. Successful candidate will exhibit a strong commitment to teaching and should be capable of conducting an independent research program.

Applications, including a current curriculum vitae, and names of three individuals who can serve as professional references, should be sent to: **Chairperson, Physiology Search Committee, c/o Human Resources Office, WVSOM, 400 North Lee Street, Lewisburg, West Virginia 24901.** Deadline for receipt of applications is 30 September 1986. Preferred starting date is 1 January 1987.

WVSOM is an Affirmative Action/Equal Opportunity Employer.

PHYSIOLOGIST. Needed at the National Vibrating Probe Facility. To investigate ionic currents through various biological systems and to help train users. For background see *Trends in Neuroscience*, December 1985. We need a resourceful, junior investigator who enjoys challenging, collaborative work in a small laboratory. Growth towards greater independence will be encouraged. Supported by a 5-year renewable grant which will start 1 September. Send résumé plus names, addresses, and telephone numbers of three references to: **Lionel Jaffe, Marine Biological Laboratory, Woods Hole, MA 02543.**

POSTDOCTORAL OR RESEARCH ASSOCIATE POSITION

Positions are available immediately to join research effort in the short-term testing of suspected carcinogens and their metabolites. Applicant should be knowledgeable and experienced in the conduct of the Ames *Salmonella* Assay, as well as being familiar with mammalian mutagenesis assays and measures of chromosome damage. Individuals with strong backgrounds in related areas are urged to apply. The duration of the research effort will be a minimum of 3 years. Salary commensurate with experience and academic background. Send curriculum vitae and names of three references to: **Dr. John Froines, University of California, Los Angeles, UCLA School of Public Health, Los Angeles, CA 90024.**

POSTDOCTORAL FELLOW to study behavioral effects of drugs and toxicants in aging animals. Experience in behavioral pharmacology/toxicology desirable. Must be U.S. citizen or permanent resident. Send curriculum vitae and names of three references to: **Dr. Deborah A. Cory-Slechta, P.O. Box RBB, University of Rochester Medical Center, Rochester, NY 14642.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE/ASSISTANT RESEARCH BIOCHEMIST position is available at the University of California, San Francisco in basic research in biochemistry and biophysics. Research centers around studies of enzyme mechanisms, enzyme structure-function relations, biochemical toxicology, and novel coenzymes. Starting salary from \$24,000 to \$35,000, depending on relevant experience. Candidates should possess a Ph.D. and be available for a minimum of 2 years. Applicants with research experience in protein chemistry or enzymology preferred. Send curriculum vitae and names of references to: **Administrative Assistant, Molecular Biology Division, VA Medical Center (151-S), 4150 Clement Street, San Francisco, CA 94121.**

POSTDOCTORAL MOLECULAR BIOLOGIST: Position available for a highly motivated Ph.D. with expertise in recombinant DNA and nucleic acid hybridization technologies. Prior experience with mycoplasma cultivation and analysis as well as monoclonal antibody production is desirable. Salary commensurate with experience. Send curriculum vitae and names of three references to: **Dr. Steven J. Geary, Bionique Laboratories, Inc., Bloomington Road, Saranac Lake, New York 12983.**

Ph.D. Scientists

Travenol Laboratories, Inc., is recognized throughout the world for creating cost-effective, innovative medical products. As an industry-leading corporation, we support our developmental efforts by aggressively breaking new ground in scientific research. Making a significant contribution to this end is our Chicago area R&D facility, where positions are now available in the following disciplines:

CELL BIOLOGY

This senior position will supervise research in immunomodulation and cell preservation, and develop innovative analytical methodologies. Requirements include a Ph.D. with 1+ years postdoctoral training in cell biology, immunology, or biochemistry. Additional skills needed in mammalian cell culture, microscopy, radioisotope assays and SAS computer analyses, plus experience in handling lab animals.

POSTDOCTORAL INVESTIGATOR

Responsibilities include participation in research in immunology and blood cell therapy. Research will involve developing analytical methodologies including phenotyping and cytolytic assays as well as working with laboratory animals. We require a Ph.D. with doctoral training in immunology or biochemistry, laboratory skills in immunology, serology, radioisotope assays, and animal models.

Travenol provides excellent salaries and benefits, including retirement and employee stock purchase plans. For confidential consideration, please send your resume with salary history to:



Staffing/Manpower Planning
Travenol Laboratories, Inc.
Dept. SN
P.O. Box 490
Round Lake, IL 60073

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Dr. Kent A. Kimball
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The Howard Hughes Medical Institute and

The National Institutes of Health again announce

The Program for Research Opportunities for Medical Students 1987-88

HHMI-NIH Research Scholars can spend 9-12 months in one of the 1,000 research laboratories located at the
NATIONAL INSTITUTES OF HEALTH, Bethesda, MD.

Salary, fringe benefits and travel will be provided.

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.

POSITIONS OPEN

Atmospheric Chemistry/University of Virginia POSTDOCTORAL POSITION available to work on the Global Precipitation Chemistry Project, investigating the processes controlling the composition of precipitation in remote areas of the world. Send résumé and three references to: **Dr. James N. Galloway, Department of Environmental Sciences, Clark Hall, University of Virginia, Charlottesville, VA 22903.**

POSTDOCTORAL POSITION. Plant physiologist and/or biochemist to participate in an NSF-funded study of the regulation of whole leaf photosynthesis, RuBP carboxylase, and carbon metabolism by a recently described in vivo inhibitor of RuBP carboxylase [PNAS 82, 8024-8028 (1985)]. Knowledge of photosynthesis, gas exchange and enzyme-metabolite extraction and assay helpful. Position is in the Biological Sciences Center of the Desert Research Institute, a part of the University of Nevada System, with **Dr. Jeff Seemann and Dr. Tom Sharkey.** Postdoctoral is for 2 years at \$20,000 per year, plus benefits. Send curriculum vitae, statement of qualifications, and the names of three references by 31 August 1986 to: **Twyla Harrison, Personnel Officer, Desert Research Institute, P.O. Box 60220, Reno, NV 89506.** *The Desert Research Institute is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION available to work on the molecular biology of respiratory syncytial virus. Applicants should have experience in recombinant DNA technology and molecular virology. Send curriculum vitae and list of references to: **Dr. Jean L. Patterson, Assistant Professor of Microbiology and Molecular Genetics, Harvard Medical School, Division of Infectious Diseases, Children's Hospital, 300 Longwood Avenue, Boston, MA 02115.**

POSTDOCTORAL POSITION: The Dana-Farber Cancer Institute is seeking to fill one research position at the postdoctoral level to study the regulation and specificity of the immune response to viruses. Both cellular and molecular techniques are utilized. Available immediately. Joint appointment will be held in an appropriate department of Harvard Medical School. Send curriculum vitae and names of three references to: **Dr. Carol S. Reiss, DANA-FARBER CANCER INSTITUTE, 44 Binney Street, Boston, MA 02115.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION: Available fall 1986 to study changes in ribonucleotide reductase during the mammalian cell cycle. Experience in enzymology/protein chemistry and mammalian cell culture desirable. Send curriculum vitae and names of three references to: **Dr. Henry Paulus, Department of Metabolic Regulation, Boston Biomedical Research Institute, 20 Staniford Street, Boston, MA 02114.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS are available in the area of organization and regulation of genes specifying biodegradation of chlorinated compounds, desulfurization of coal, as well as in the production of exopolysaccharide alginate during infection of cystic fibrosis patients with *Pseudomonas aeruginosa*. Experience in molecular biology and protein biochemistry, particularly in DNA sequencing, S1 nuclease and reverse transcriptase mapping, site-directed mutagenesis, purification and conformational studies with enzymes, and so forth, is desirable. The projects are under the supervision of **Dr. A. M. Chakrabarty.** Send curriculum vitae and names of three references to: **Kenneth C. Johnson, University of Illinois at Chicago, Department of Microbiology/Immunology, E-703 MSA, 835 South Wolcott, Chicago, IL 60612.** *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS. Two positions available immediately to study absorption and metabolism of isotopically labeled forms of folacin and vitamin B-6 in animals and human subjects. Ph.D. in nutrition, biochemistry or related field, and experience in biochemical analysis required. Salary: \$18,000 per year. Send résumé, transcripts, and three letters of reference to: **Dr. J. F. Gregory, Food Science and Human Nutrition Department, University of Florida, Gainesville, FL 32611.**

POSITIONS OPEN

A POSTDOCTORAL POSITION is available in a combined clinical and basic science research program involving the quantification of Positron Emission Tomographic (PET) images and the development and use of formal mathematical models to investigate brain/behavior relationships. A strong background in multivariate statistical modeling and parameter estimation is preferred, although candidates with a background in physics and image processing will also be considered. Applicants should send curriculum vitae and at least two references to: **D. A. Rottenberg, M.D., Department of Neurology, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.**

POSTDOCTORAL POSITION is available for a microbiologist/immunologist to conduct research investigating the respiratory disease in animals. Presently, ongoing studies include the isolation and characterization of capsular polysaccharide antigen, certain animal pathogens, along with investigation into the aerobiology of respiratory disease. A background in biochemical purification of cell products, transblotting techniques, and immunochemistry is desired. Candidate should have a doctoral degree and previous research experience. To apply send a letter of application, three letters of reference and curriculum vitae by 1 October 1986 to:

**Harvey D. Hilley, D.V.M., Ph.D.
School of Veterinary Medicine
North Carolina State University
4700 Hillsborough Street
Raleigh, North Carolina 27606**

North Carolina State University is an Equal Opportunity Employer.

POSTDOCTORAL POSITION

Available September 1986 to investigate the fatty acid acylation of protein in the yeast system. Prefer recent Ph.D. with experience and interest in enzymology and molecular genetics. Send résumé and three letters of reference to:

**Dr. Jose Sy
Department of Chemistry
California State University, Fresno
Fresno, CA 93740**

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available to study the genetic aspects of slow viruses or Alzheimer's disease. Applicants should have a strong background in gene cloning, expression vectors, and transfections in eukaryotic systems. Nucleic acid sequencing experience desirable. Salary range \$21,000 to \$26,000, depending on experience. Send curriculum vitae and three references to:

**Dr. Nikos Robakis
New York State Institute For Basic Research
1050 Forest Hill Road
Staten Island, NY 10314**

POSTDOCTORAL POSITION in reproductive biology/physiology. Responsibilities involve studies on mechanisms controlling androgen microenvironment inside male reproductive tract tubules. Applicant should have background in cell biology/physiology. Experience with molecular transport mechanisms, receptor/ligand interactions, perfusion/perfusion, or tissue culture techniques desirable. Send curriculum vitae and three references to: **Terry T. Turner, Ph.D., Department of Urology, University of Virginia School of Medicine, Charlottesville, VA 22908.** *UVA is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS available immediately to participate in ongoing investigations of desmosome-mediated cell-cell recognition and desmosomal assembly. Studies will include protein-protein interactions; regulation of desmosome assembly. Experience in hybridoma and tissue culture technology and/or methods of protein chemistry is essential. Send application, including curriculum vitae and the names of three references to: **Dr. Malcolm S. Steinberg, Department of Biology, Princeton University, Princeton, NJ 08544.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITIONS IN CARCINOGENESIS

One to two positions available immediately in established program, studying comparative mechanisms of carcinogenesis, promotion, and inhibition. Appointees may work in any of several areas including biochemistry and pharmacokinetics of xenobiotic metabolism, DNA damage and repair; biology of tumor promotion and progression; chemical synthesis of inhibition and promoter analogues and determination of adduct structures. Ph.D. in biochemistry, toxicology, molecular biology, or related field required. Positions are for 2 to 4 years at \$18,000 to \$22,000. Send curriculum vitae, transcripts, and three letters of reference by 22 August 1986 to: **Dr. George S. Bailey, Director, Marine-Freshwater Biomedical Center, Wiegand Hall, Oregon State University, Corvallis, OR 97331; telephone: 503-754-3164.** *OSU is an Affirmative Action/Equal Opportunity Employer and complies with section 504 of the rehabilitation act of 1973.*

POSTDOCTORAL POSITION: MOLECULAR NEUROBIOLOGY

Postdoctoral position open for neurobiologist interested in applying recombinant DNA techniques to the study of the mammalian nervous system. Successful applicant will join a strong, interdisciplinary molecular neurobiology group primarily interested in the structure and expression of genes for neurotrophic factors and neuropeptide hormones. Candidate should have an M.D. degree and/or a Ph.D. degree in neurobiology. Previous experience in molecular biology is preferred, but not required. Send curriculum vitae and three recommendation letters by 1 October 1986 to: **Dr. Håkan Persson, Department of Medical Genetics, Biomedical Center, Box 589, S-751 23 Uppsala, Sweden.**

POSTDOCTORAL POSITION

Applications are invited for a postdoctoral research position for 2 years. We are currently studying the formation and transport of lipoproteins in both the liver and the small intestine. Send résumé, statement of qualifications, transcripts, and two letters of recommendation to: **Patrick Tso, Ph.D., Department of Physiology, The University of Tennessee, Memphis, 894 Union Avenue (NA426), Memphis, TN 38163.**

The University of Tennessee is an Equal Opportunity Employer.

POSTDOCTORAL POSITION available now to develop and study the enzymology and cellular pharmacology of protein kinase inhibitors or to study the protein chemistry and cell biology of substrates of protein kinases. Previous experience in peptide synthesis, protein chemistry, or enzymology is desirable. Salary negotiable. Send curriculum vitae and names of three references to: **Dr. David B. Glass, Department of Pharmacology, Emory University School of Medicine, Atlanta, GA 30322.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION AVAILABLE

A postdoctoral position is available in the laboratory of Dr. James M. Krueger. The position will be part of an interdisciplinary program concerned with the relationships between sleep and the immune system. Ongoing projects include: (i) localization in brain of the site(s) of action of interleukin-1 and muramyl peptides; (ii) development of quantitative chemical assays for muramyl peptides; (iii) determining the effects of centrally administered interleukin-1 and muramyl peptides on sleep and the immune response; (iv) determination of muramyl peptide and lipid A structure-sleep activity relationships; and (v) investigation of the interaction between drugs known to affect sleep and muramyl peptides and interleukin-1. A background in neurobiology, physiology, and/or immunochemistry is preferred. **CONTACT: James M. Krueger, Ph.D., Department of Physiology and Biophysics, The University of Tennessee, Memphis, 894 Union Avenue, Memphis, TN 38163.**

The University of Tennessee is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to study the regulation of receptor interaction with adenylate cyclase in the ovary. Ph.D. with background in either membrane biochemistry, cell biology, or recombinant DNA technology preferred. Send curriculum vitae and three letters of reference to: **Dr. Joel Abramowitz, Zoology Department, Iowa State University, Ames, IA 50011.**

TRUDEAU INSTITUTE

A **POSTDOCTORAL POSITION** is available to study the **immune response to tumors as a model of immunoregulation**. Candidates with training in cellular immunology, and interested in employing in vitro assays to analyze in vivo models of successful and unsuccessful immune responses should apply. A competitive salary and fringe benefits are offered and institute housing will be made available. Future employment is possible, depending on performance.

The Trudeau Institute is a not-for-profit pure research institute that specializes in studying the immunology of host defense mechanisms. It is located on the shore of Saranac Lake, 8 miles from Lake Placid, New York.

Send curriculum vitae and the names of three references to:

**Dr. R. J. North, Director
Trudeau Institute, Inc.
P.O. Box 59
Saranac Lake, NY 12983**

A **POSTDOCTORAL POSITION** is available immediately to study the role of **viral oncogene expression in murine leukemogenesis**. Experience in cell biology, molecular immunology, or molecular biology, and a general interest in immunobiology are desired. Salary is dependent upon experience, in accord with NIH guidelines. Subsidized housing is available.

The Trudeau Institute is a not-for-profit research institute located in the Adirondack Mountains on the shore of Saranac Lake, 10 miles from Lake Placid, New York. Send résumé and names of three references to:

**David Hines
Trudeau Institute, Inc.
P.O. Box 59
Saranac Lake, NY 12983**

POSTDOCTORAL POSITION IN DEMOGRAPHIC AND POPULATION GENETICS. Immediate opening for an individual with a strong quantitative background and interest in demographic and genetic analysis of pedigrees, to collaborate with investigators in our Population Genetics Laboratory (**Drs. Bennett Dyke, Jean W. MacCluer, and Candace M. Kammerer**). Ongoing projects include demographic and genetic analyses of captive primate colonies, and studies of genetic correlates of fertility and of disease susceptibility in pedigreed animal and human populations. Please send résumé and names of three references by 22 August 1986 to: **Personnel Director, Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284.**

An Equal Opportunity Employer, M/F.

POSTDOCTORAL RESEARCH ASSOCIATE POSITION available to study hepatic gluconeogenesis using isotopic tracer methods and mathematical or hormonal regulation of gluconeogenesis required. Experience in hepatocyte isolation or tracer methodology desired. Position available September 1986. Send curriculum vitae and names of three references to: **Joanne K. Kelleher, Ph.D., Department of Physiology, The George Washington University Medical Center, 2300 I Street, NW, Washington, DC 20037.**

THE RESEARCH DEPARTMENT OF CENTRAL INSTITUTE FOR THE DEAF (CID) seeks a beginning **POSTDOCTORAL RESEARCH SCIENTIST** to work on the acoustic characteristics and perception of consonants. This is an annual position to start on or after 1 October 1986 and will be renewable for approximately 3 years. Applicants should promptly submit résumés, a statement of research interests, and the names and addresses of four references to: **Dr. James D. Miller, Director of Research, Central Institute for the Deaf, 818 South Euclid, Saint Louis, MO 63110. CID is an Equal Opportunity Employer.**

POSITIONS OPEN

RESEARCH/TEACHING SPECIALIST IV

Available immediately to perform experiments in molecular biology, cell biology, virology, and biochemistry in interferon research, molecular genetics, and related areas. Candidates should have familiarity/experience in several of the following areas: nucleic acid hybridization, Northern and Southern blots, plasmic isolation and construction, DNA sequencing, tissue culture techniques, gel electrophoresis, protein, RNA and DNA synthesis, and preparation of enzymes and cell components. Bachelor's degree in a relevant science, plus 1 year of related experience. Applicants with master's degree in a relevant science preferred. Please send résumé to: **Mila C. Gen-drano, University of Medicine and Dentistry of New Jersey, Robert Wood Johnson Medical School, Office of Human Resources, 675 Old Hoes Lane, Piscataway, NJ 08854-5635. An Equal Opportunity/Affirmative Action Employer, M/F/H/V.**

POSITIONS OPEN

RESEARCH ASSOCIATE position available fall/winter, 1986 for a recent Ph.D. to participate in studies on biosynthesis, modification, and organization of neuronal cytoskeletal proteins. The focus will be on neurons in culture and in developing embryos, using biochemical, immunohistochemical, and ultrastructural approaches. Send résumé to: **Dr. Gudrun S. Bennett, Department of Zoology, Bartram Hall, The University of Florida, Gainesville, FL 32611. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE (POSTDOCTORAL). Research on iron-binding proteins. Experience with EPR, potentiometric titrations, and coordination chemistry important. Salary: \$20,000. Employment from 1 September 1986 to 30 November 1987. Respond to: **Dr. George W. Bates, Department of Biochemistry and Biophysics, Texas A&M University, College Station, Texas 77843. Texas A&M University is an Equal Opportunity Employer.**

DIRECTOR OF R&D: CANCER/ONCOGENES

The establishment of a long term Joint Venture with one of the world's largest chemical corporations, has created an opening for a top-level scientific directorship at Applied bioTechnology. The responsibilities in this position include: providing excellence in scientific and managerial leadership to the existing professional staff; the planning and effective implementation of a substantial expansion for this endeavor; and most importantly the development of high quality, novel products for diagnostic and therapeutic applications of the company's proprietary oncogene technology. Located in Cambridge, MA the company has a number of active collaborations with several prestigious academic institutions. The individual we are seeking will also be responsible for managing the liaison activities with these institutions as well as play a key role in the overall management of the Joint Venture.

The company is seeking an experienced, highly qualified, active scientist, preferably with specific expertise in the analysis of gene structure and function in the molecular biology of cancer. Professional management skills and high personal energy which will enhance the current challenging and dynamic environment are also highly desirable qualities.

If you are qualified, please submit your c.v. with the names of three references and list of recent publications to: President, Applied bioTechnology, Inc., 80 Rogers Street, Cambridge, MA 02142. Information will be held in strict confidence.

An Equal Opportunity Employer

Applied bioTechnology, Inc.

POSITIONS OPEN

PHARMACOLOGIST/TOXICOLOGIST. Washington University School of Medicine, Division of Laboratory Medicine in Departments of Pathology and Medicine, is conducting a search for a tenure-track faculty position in our clinical chemistry section. Dynamic individuals with an M.D. and/or Ph.D. degree with strong research interests and background, as well as a commitment to excellence in teaching and patient care, is sought. Position also includes an appointment at Barnes Hospital, a 1200-bed teaching hospital of the Washington University Medical Center. Academic rank and salary will be commensurate with prior experience and accomplishments. Send curriculum vitae and research and service interests to: **Jack H. Ladenson, Ph.D., or Jay M. McDonald, M.D., Division of Laboratory Medicine, Washington University School of Medicine, 660 South Euclid—Box 8118, St. Louis, MO 63110.**

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE positions available to study secretion/endocytosis/secretory vesicle membrane protein structure using protein chemistry and molecular biology. Available October 1986. Apply with curriculum vitae and the names and telephone numbers of two references to: **Dr. Thomas C. Südhof, Department of Molecular Genetics, University of Texas Health Science Center, 5323 Harry Hines Boulevard, Dallas, Texas 75235.**

POSTDOCTORAL POSITION IN NEUROBIOLOGY—Available 1 September to study physiology and development of neuromuscular junctions and motor control systems in insects, including patch-clamping studies of developing muscle cells. Ph.D. and experience with intracellular recording required. Apply to: **Dr. Ann E. Kammer, Department of Zoology, Arizona State University (ASU), Tempe, AZ 85287.** ASU is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION IN PLANT MOLECULAR BIOLOGY. Position available 1 October 1986, to investigate the initiation and transcription of specific genes in isolated wheat embryo nuclei. Candidates should have Ph.D. in biochemistry, molecular biology, or related discipline. Preference given to applicants with laboratory experience in recombinant DNA techniques. Starting salary is \$18,000 for 12 months. Send curriculum vitae, transcripts, and three letters of reference to: **Dr. Dawn S. Luthe, Department of Biochemistry, Mississippi State University, Drawer BB, Mississippi State, MS 39762.** Mississippi State University is an Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSISTANT: to carry out routine laboratory procedures and record keeping, biochemical methods, chromatography/electrophoresis/enzyme immunoassay. Required: B.A./B.S. and prior laboratory experience. Fringe benefits and educational opportunities. Salary commensurate with experience. Send résumés (no letters please) to: **Dr. Ariel Hollinshead, Laboratory of Virus and Cancer Research, Department of Medicine, George Washington University Medical Center, 2300 I Street, NW, Washington, DC 20037.** An Equal Opportunity/Affirmative Action Employer.

RESEARCH SCIENTIST SEATTLE BIOMEDICAL RESEARCH INSTITUTE

The SBRI (formerly the Issaquah Health Research Institute) is an independent, non-profit basic biomedical research institution that currently has a strong research focus in molecular and immunological parasitology. The institute is expanding its research base to include other areas of infectious disease, as well as basic molecular and immunological research. This expansion will coincide with our relocation to newly constructed laboratory facilities near the University of Washington and the Fred Hutchinson Cancer Research Center. Applications to join the institute are invited from investigators who wish to conduct their independent research programs in a highly cooperative and pleasant environment. All investigators are required to support their programs with external funds. Send curriculum vitae, summary of research interests, and names of three references to:

**Dr. Kenneth Stuart, Director
The Seattle Biomedical Research Institute
4 Nickerson Street, Seattle, WA 98109
Equal Opportunity Employer**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

Job focuses on the purification and functional characterization of human B cell growth factor (BCGF) and its putative receptor, via (i) the establishment of BCGF-dependent or responding B cell line, (ii) the development of monoclonal antibodies to BCGF and its receptor, and (iii) the uses of a series of affinity chromatographic column, electrophoresis, and HPLC. Extensive experience in tissue culture and hybridoma techniques. Basic knowledge in biochemistry is also required. Ph.D. degree, major in the field of immunology. Forty hours per week. Salary: \$18,000 per annum. Contact: **Louisiana Office of Employment Service, 6701 Airline Highway, Metairie, Louisiana 70003.**

Equal Opportunity Employer

RESEARCH ASSOCIATE. Immediate position available to set up and direct laboratory for immunohistochemistry of the lower urinary tract. Laboratory to become an integral part of ongoing, multidisciplinary, basic, and clinical investigation into lower urinary tract function and dysfunction. Successful candidate must be either recent Ph.D. or M.S. with several years of experience in standard H&E, as well as immunohistochemistry. Electron microscopy experience helpful. Salary commensurate with experience. Send curriculum vitae and name, address, and telephone number of three references to: **Dr. Michael R. Ruggieri, University of Pennsylvania, Division of Urology, 5 Silverstein/H.U.P., 3400 Spruce Street, Philadelphia, PA 19104.** An Equal Opportunity/Affirmative Action Employer.

LA TROBE UNIVERSITY MELBOURNE AUSTRALIA

SCHOOL OF BIOLOGICAL SCIENCES RESEARCH FELLOW IN MICROBIOLOGY (FIXED TERM—3 YEARS)

A postdoctoral research position is available to participate in studies on the microbiological processes occurring in commercial mushroom composting with the view to preparing an improved selective nutritional environment for the cultivation of mushrooms and to optimize commercial yields. Applicants should have a strong background in the selective isolation and identification of microorganisms together with a familiarity with the various analytical procedures necessary to assess the changes in the composition of components of the compost such as cellulose, hemicellulose, lignin, organic nitrogen, and fatty acids.

Additional details are available from: **Dr. B. J. Macaulay, Department of Microbiology, La Trobe University.**

CLOSING DATE: 5 September 1986.

REFERENCE NUMBER: AO/018/002.

SALARY: A\$27,233 to A\$35,777.

Applications (marked confidential) including reference number, names of three referees, and curriculum vitae should be forwarded to: **The Staff Officer, La Trobe University, Bundoora, Victoria, 3083, Australia.** Equal Opportunity is university policy.

THE U.S. GEOLOGICAL SURVEY (USGS), GEOLOGIC DIVISION, BRANCH OF PALEONTOLOGY AND STRATIGRAPHY, announces a vacancy for **RESEARCH GEOLOGIST** in Quaternary paleontology and paleoclimatology. Duties include paleoclimatic and paleoenvironmental investigations and original research involving Quaternary pollen, spores, and acid-resistant algae, and plant macrofossil remains from lake sediments and peat/mire middens within and surrounding the Great Basin region. The position will be located in Denver, Colorado. Applicants should have Ph.D. in geology or equivalent experience and must be U.S. citizens. Anticipate that the position will be at the GS-12 through -15 (\$31,000 to \$52,000) level. For further information, contact: **J. Platt Bradbury, U.S. Geological Survey, Denver Federal Center, Mail Stop 919, Box 25046, Denver, Colorado 80225; telephone: 303-236-5666.** Application must include Standard Form 171 (SF-171), Application for Federal Employment, available from above address or any Federal Personnel Office. Application must be received by: **J. P. Bradbury by 15 September 1986.** The USGS is an Equal Opportunity Employer.

POSITIONS OPEN

RESEARCH ASSISTANT position available in immunology laboratory. Knowledge of molecular biology techniques and B.S. or M.S. in life sciences required. Duties include DNA and RNA preparation, gel electrophoresis, Northern and Southern blotting, gene cloning in plasmids and phage, cell fractionation, and tissue culture. Send curriculum vitae, transcripts, and three letters of reference to: **Harold Wheeler, Employment Manager, Jackson Laboratory, Bar Harbor, ME 04609.** Equal Opportunity Employer.

RESEARCH ASSOCIATE IN MOLECULAR BIOLOGY

Two NIH grant-funded positions are available immediately for Ph.D. level research associates to study:

Project 1: Structure and regulation of rat liver acute phase genes (alpha macroglobulin family) with emphasis on identification of *cis*-acting control sequences of these genes and *trans*-acting factors.

Project 2: Cloning and characterization of human neutrophil receptors for chemotactic peptides (C5a receptor, formylpeptide receptor). Expression of recombinant human C5a *Escherichia coli*.

Salary will be commensurate with experience. Candidates holding a Ph.D. degree with experience in a related research area should submit curriculum vitae and names of three references to: **Dr. Georg H. Fey, Division of Molecular Immunology, IMM14, Research Institute of Scripps Clinic, 10666 North Torrey Pines Road, La Jolla, California 92037.**

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

RESEARCH DIRECTOR, EAR, NOSE AND THROAT (ENT) DEPARTMENT. The Department of Otolaryngology—Head and Neck Surgery (HNS) at Henry Ford Hospital seeks a new research director effective immediately. This individual should have a minimum of 5 years of postdoctoral experience, strong administrative skills, and a demonstrated excellence in research. An outstanding publication record is expected. The position includes establishment of the individual's research laboratory and direction of other departmental research, including clinical research and the research training of residents. Currently the departmental laboratories include electrophysiology, animal psychoacoustics, and histology, with convenient access to TEM and SEM facilities. However, candidates in all areas of research relevant to ENT/HNS will be considered. Interested individuals should send a résumé, names of three references, and a brief letter explaining their qualifications and research interests to: **Richard D. Nichols, M.D., Chairman, Department of Otolaryngology—Head and Neck Surgery, Henry Ford Hospital, 2799 West Grand Boulevard, Detroit, MI 48202.** Henry Ford Hospital is an Affirmative Action/Equal Opportunity Employer.

U.S. DEPARTMENT OF AGRICULTURE (USDA)—AGRICULTURAL RESEARCH SERVICE

RESEARCH PLANT PATHOLOGIST (GS-11/12)—Research on virus vector interactions and molecular, cellular, and population levels.

SYSTEMS ECOLOGIST (GS-11/13)—Modeling of plant pest dynamics. Must be a U.S. citizen. Starting salaries: GS-11 = \$26,381; GS-12 = \$31,619; GS-13 = \$37,599, depending on qualifications. For position information, telephone: **Richard Soper, USDA, ARS, Cornell University, Ithaca, NY; 607-257-2030.** Submit application forms (résumés alone are not acceptable) to: **Alice MacNamara, USDA, ARS, PD, Room 123, Building 003, BARC-West, Beltsville, MD 20705; 301-344-2944.** Applications must be marked 6E048 and postmarked no later than 19 September 1986. USDA is an Equal Opportunity Employer. Women and minorities are urged to apply.

RESEARCH SCIENTIST II to conduct research involving characterization and K-Ar geochronological study of clay minerals and zeolites and to prepare proposals for new research. Require Ph.D. degree in geophysical sciences with 3 years of experience in the job or related occupation such as teaching and research. Salary: \$20,000 per year. Apply with résumé to: **Georgia Department of Labor, One Peachtree Street, NE, Atlanta, GA 30303,** or to the nearest Georgia Job Service Center. Control number GA 5159396.

NEUROPHARMACOLOGIST

The Merrell Dow Research Institute has a challenging career opportunity for an experienced Neuropharmacologist to join our expanding CNS Research Group.

The successful candidate would join a multidisciplinary group and be expected to contribute actively to both basic research and drug discovery programs directed toward the identification of new therapeutic approaches to CNS disorders. Qualified applicants should have a PhD in Pharmacology/Neuroscience with a minimum of 3 years post-doctoral experience in a neuroscience related area. He/She should have practical experience of working with defined neurotransmitter systems using neuropharmacological techniques such as behavioral studies, microinjections, lesioning, microsurgery, neuroanatomy and neurohistology, etc. An ability to work with state-of-the-art equipment and techniques are consistent with our modern approach to research and the candidate should have shown clear evidence of familiarity with these areas of expertise in his/her scientific publications.

We offer excellent compensation, comprehensive benefits and relocation assistance. Please send your curriculum vitae and names of three references in confidence to:

Merrell Dow

Personnel Services Manager

MERRELL DOW RESEARCH INSTITUTE

2110 East Galbraith Road
Cincinnati, OH 45215

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PEPTIDE CHEMIST

As part of a multidisciplinary team, the Reproduction and Growth Physiology Research Unit at Upjohn is seeking an outstanding scientist interested in the design, synthesis and purification of peptides involved in the regulation of growth and of protein and lipid metabolism in domestic animals.

The successful candidate for this opening will have a Ph.D. in organic chemistry with two years or more of postdoctoral experience in the area of design, synthesis and purification and characterization of biologically active peptides. The individual should have an outstanding academic and publication record plus knowledge of biochemistry, physical biochemistry and endocrinology.

Kalamazoo is a mid-sized Southwestern Michigan community offering an excellent mix of cultural/recreational opportunities including lakes, nearby colleges, and a four-season climate. The Upjohn Company offers an excellent salary, benefits and relocation plan.

For confidential consideration, please call from outside of Michigan toll free 1-800-253-8600, extension 3-6767; or inside Michigan collect (616) 323-6767 to request a specialized employment application be sent to you immediately. Please refer to Ad Number 19303-B when calling.



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POSITIONS OPEN

The Laboratories of Neurobiology of Laval University offers a 1 to 2 years **RESEARCH POSITION**. The candidate should have a Ph.D. or the equivalent and 1 or 2 years of postdoctoral training in neurosciences. During this 2-year period, the candidate will be required to apply for Medical Research Council of Canada (MRC) or Quebec Medical Research Council (FRSQ) scholarship. If the candidate obtains a scholarship, he would then be placed in a tenure-track position in the Faculty of Medicine of Laval University. Please send résumé to: Dr. J. P. Tremblay, Laboratory of Neurobiology, Laval University School of Medicine, Quebec, Canada G1K 7P4.

RESEARCH STAFF MEMBER in Thin Film Material Science. Principal responsibility is to originate, develop, and direct fundamental experiments on structure and properties of thin film materials that are of importance to advanced magnetic and optical storage technology applications. Requires: Ph.D. or equivalent in materials science and 3 years of related research experience (candidates without Ph.D. must demonstrate strong background of independent research related to above); demonstrated skill and extensive experience in microstructural characterization (RBS, TEM, XRDm, abd, and XPS), laser interactions with films (nanosecond pulses, optical properties, and ablation), and magnetic characterization (B-H loop analysis, read and write artifacts); experience in directing and coordinating research efforts in the above and extensive experience on the science and storage technology of multilayered materials and strong publications record related to above. **Salary** \$50,000 per year; 40 hours per week. Job and interview site: San Jose, California. Send this ad and résumé to: Job number DC-5523, P.O. Box 9560, Sacramento, CA 95823-0560, not later than 23 August 1986.

AQUATIC HABITAT INSTITUTE

New institute coordinating and performing studies of the effects of pollution on the San Francisco Bay-Delta is seeking applications for **SCIENTIFIC STAFF POSITIONS** at all levels above minimum qualifications. Applicants must have a minimum of a master's degree in a marine, estuarine, or limnological discipline and should have demonstrated interdisciplinary experience and expertise, and ability to critically review and synthesize research and monitoring information related to estuarine pollution problems. Experience in the conceptual planning and management of interdisciplinary pollution studies desirable. Salary commensurate with qualifications and experience. Send curriculum vitae, salary history, and names of three references to: Douglas A. Segar, Ph.D., Aquatic Habitat Institute, 180 Richmond Field Station, 1301 South 46th Street, Richmond, CA 94804.

SENIOR EM TECHNICIAN. Experienced, independent person needed to join multidisciplinary research group. Studies focus on the ultrastructural characteristics of the brains of fetal trisomic and neonatal neurologic mutant mice and of adult mouse chimeras. Experience in autoradiography and immunocytochemistry highly desirable. Send résumé and three letters of recommendation no later than 22 August 1986 to: Dr. M. L. Oster-Granite, Developmental Genetics Laboratory, Department of Physiology, Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205. *An Equal Opportunity/Affirmative Action Employer. Applications from all qualified candidates are welcome, applications from women and minorities are encouraged.*

SUBJECT CATALOGER (LIFE SCIENCES)—The Library of Congress is currently recruiting for a subject cataloger, skilled in reading Russian or Ukrainian, to work in its Life Sciences Subject Cataloging Division. Position minimally requires a graduate degree in library science and a bachelor's degree in the biological, agricultural, or medical sciences; reading skill in a modern European language is also required. Starting pay is \$21,804 (GS-9), although experienced catalogers may qualify for a higher salary. Interested applicants should submit, by 15 August 1986, a standard form 171, application for federal employment, to: The Library of Congress, Employment Office, 101 Independence Avenue, SE, Room LM-107, Washington, DC 20540. Vacancy Announcement 60176. Application forms and copies of the vacancy announcement may be obtained by telephone: 202-287-5620. *Equal Opportunity Employer.*

POSITIONS OPEN

SCIENTIST. New, fast developing cancer research company has immediate opening for a scientist in immunochemistry. Responsible for production and assessment of immunoconjugates. Requires Ph.D. in biochemistry, bioorganic chemistry, or immunology, plus 2 to 3 years of experience in immunochemistry. Good working knowledge of organic chemistry essential. Experience in toxin conjugation desirable. Compensation commensurate with qualifications, plus stock options. Résumé to: Personnel Department, NeoRx Corporation, 410 West Harrison Street, Seattle, WA 98119.

TRANSPORT PHYSIOLOGIST—GASTROENTEROLOGIST: New position in the cell biology of intestinal transport being developed at the assistant professorship level. Applicant must have experience in performing in vitro and in vivo transport studies in experimental animals and in man. Knowledge of transport equations and mathematical models required, as well as working knowledge of computer programming of these models. Must have 3 years of training in internal medicine and 2 years of postdoctoral fellowship training in gastroenterology. Must also be able to teach all aspects of clinical gastroenterology and all routine endoscopic diagnostic procedures.

Send letter of application, summary of research interests, curriculum vitae, and four letters of reference to: Dr. John M. Dietschy, University of Texas Health Science Center at Dallas, Dallas, Texas 75235-9030.

We are an Equal Opportunity/Affirmative Action Employer.

The University of Nevada School of Medicine, Department of Physiology has **TWO tenure-track positions open for ASSISTANT/ASSOCIATE PROFESSORS**. Ph.D., M.D. (or equivalent), at least 2 years of postdoctoral training. Demonstrated research ability in cardiovascular, gastrointestinal, nervous system, respiratory, biophysics, or bioengineering. Must be committed to highest quality teaching/research. Expected to develop active, independent NIH-funded research programs and collaborate in departmental training/research. Send curriculum vitae, three representative reprints, name, address, telephone number of three references by 8 September 1986 to: Dr. R. K. Hermesmyer, Chairman, Department of Physiology, University of Nevada School of Medicine, Reno, NV 89557. *Affirmative Action/Equal Opportunity Employer.*

CONFERENCE

SECOND INTERNATIONAL WORKSHOP ON CHROMOSOMES IN SOLID TUMORS

18-20 January 1987
Tucson, Arizona

Conference Chairman: Jeffrey M. Trent, Ph.D.

The Second International Workshop on Chromosomes in Solid Tumors will be divided into a series of invited and competitively selected presentations, as well as a poster session. The major scientific sessions, with a partial listing of the invited speakers, is presented below. This workshop will also include an optional 1-day "wet laboratory" session (restricted to the first 35 registrants) which will focus on tumor cell culture, chromosome harvesting, and chromosome banding of solid tumor specimens. The major scientific sessions include:

- **HISTORICAL PERSPECTIVES OF CHROMOSOME CHANGE**
Dr. T. C. HSU, Houston, TX
- **MOLECULAR GENETICS AND CYTOGENETICS**
Dr. R. SCHIMKE, Stanford, CA
Dr. G. WAHL, San Diego, CA
- **CHROMOSOME BANDING ANALYSIS OF HUMAN TUMORS**
Dr. W. BENEDICT, Los Angeles, CA
Dr. S. PATHAK, Houston, TX
Dr. A. SANDBERG, Buffalo, NY
- **EXPERIMENTAL CYTOGENETICS**
Dr. S. CRAM, Los Alamos, NM
Dr. E. STANBRIDGE, Irvine, CA

Requests for abstract forms and correspondence regarding the workshop should be addressed to:

Mary Humphrey, Conference Coordinator
Arizona Cancer Center, Tucson, AZ 85724
Telephone: 602-626-6044

COURSE

ADVANCED SHORT COURSE/WORKSHOP ADVANCED METHODS OF PHYSIOLOGICAL SYSTEM MODELING

18 to 20 September 1986
Los Angeles, California

organized by the
**BIOMEDICAL SIMULATIONS
RESOURCE
UNIVERSITY OF SOUTHERN
CALIFORNIA**

under the sponsorship of the
**BIOMEDICAL RESEARCH
TECHNOLOGY PROGRAM
DIVISION OF RESEARCH
RESOURCES**

NATIONAL INSTITUTES OF HEALTH

The focus of this meeting will be on **nonlinear methods** for modeling physiological system dynamics. The first 2 days will comprise advanced tutorial talks by a number of experts in this area of research. On the third day, summaries of recent research results will be presented. Extensive interactions are expected to take place throughout the meeting. There are no fees for participating in the meeting, but early registration is required since the total number of participants is limited. To obtain the program and additional information, please write to:

Professor Vasilis Z. Marmarelis, Director
Biomedical Simulations Resource
School of Engineering, OHE 500
University of Southern California
Los Angeles, CA 90089-1451
or telephone: 213-743-3648.

ANNOUNCEMENT

General Motors and the United Auto Workers announce the intention to fund research in the areas of health effects (predominantly neurotoxic) of solvents and the health effects of polymer systems. Further information describing these interests and the application process will be available after 1 August 1986. To receive this information, write: Winnie Boal, Occupational Health Advisory Board, General Motors Corporation, Room 9-256, 3044 W. Grand Boulevard, Detroit, MI 48202.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP immediately available for studies on the molecular basis of differentiation in the mammary gland or skeletal muscle. Limited to those with recent doctorate; prefer background in biochemistry or molecular biology. Send curriculum vitae and letters of reference to: Frank E. Stockdale, M.D., Ph.D., Stanford School of Medicine, M211, Stanford, CA 94305-5306.

SYMPOSIUM

HOW TO MAKE MICROCAPSULES—A HANDS-ON COURSE. A 3-day laboratory course designed to teach the art and science of microcapsule making. Suitable for biologists, pharmacists, chemists, life scientists, and engineers. Enrollment limited to 12. Lectures and laboratory sessions by: Dr. Curt Thies, Professor of Chemical Engineering at Washington University in St. Louis. Fall session: 20 to 22 October 1986, and 19 to 21 November 1986. For information, telephone: 314-889-6066.

TRAINEESHIP

Applications sought for 3-year NIH-funded **TRAINEESHIPS** to begin 1 July 1987, in multidisciplinary research/studies on dental caries, leading to M.S. or Ph.D. Applicants must be U.S. citizens and hold dental, M.D. or Ph.D. degrees. Stipend range \$15,996 to \$30,000, depending on experience. *Equal Opportunity Employer, women and minority applicants encouraged.* Contact: Dr. L. Messer, 18:214 Moos Tower, University of Minnesota School of Dentistry, Minneapolis, MN 55455.

Lilly Research Laboratories Postdoctoral Scientist Program

Eli Lilly and Company

THE LILLY RESEARCH LABORATORIES, a Division of Eli Lilly and Company, is offering postdoctoral research opportunities in several areas of biology, pharmacology, and chemistry. Postdoctoral Scientists will work in close association with Lilly scientists who are involved in the basic research process of drug discovery. Publication and presentation of results will be an integral part of the program. This postdoctoral experience is designed to give individuals in-depth research training in a focused area of biology and/or chemistry. The program will also provide an opportunity to become acquainted with the drug development process within the pharmaceutical industry. Postdoctoral Scientists will be expected to participate fully in the conceptual and design phases of projects, within the following areas:

Cardiovascular Research:

Scientist with training in pharmacology or biochemistry will perform basic research on the mechanisms of vascular smooth muscle contractility and relaxation. Experience with intracellular mediators, enzyme assays, or purification techniques is desirable. The scientist will combine *in vitro* tissue techniques with biochemical approaches to understand vascular smooth muscle functional responses to drugs.

Cytokine/Lymphokine Research:

Postdoctoral scientists will work in a laboratory currently studying immunoregulatory effects of cytokines and the roles of cytokines

in disease states. The study will include molecular, cellular and organ system approaches. Experience in cytokine assays (biological, immunological and molecular) is desirable.

High Resolution Electrophoresis Research:

Scientist will develop capillary electrophoresis for separation and quantitation of protein products and impurities. Research will support rapidly developing biotechnology projects in areas of biology, chemistry and process development. The project includes development of a detector and optimization of resolution. A strong background in instrumentation and analytical chemistry is required; experience in electrophoresis or capillary liquid chromatography is desired.

Monoclonal Antibody Research:

The postdoctoral scientist will join a monoclonal antibody research group to conduct studies on the role of growth factors on connective tissue and malignant cell proliferation. Expertise in cell biology and monoclonal antibody production is desirable.

Postdoctoral appointments are of one-year duration and are renewable for a second year with mutual agreement. Candidates with no more than one previous postdoctoral experience are encouraged to apply.

Eli Lilly and Company will provide a comprehensive pay and benefits program including relocation expenses.

Qualified applicants should send their current curriculum vitae, indicating program of interest to:

**John Crooks, Manager
College Relations (PSP)²
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285**



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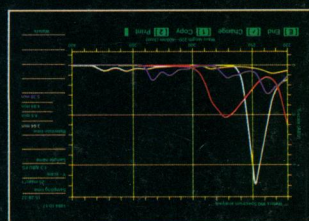
800-252-HPLC, in Massachusetts, 617-478-2000. Waters Chromatography Division, Millipore Corporation, 34 Maple Street, Milford, Massachusetts 01757.

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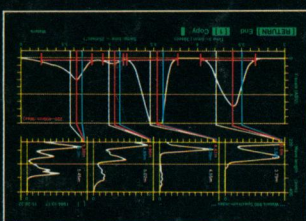
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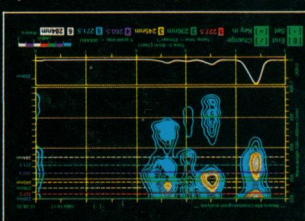
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