

(Continued from page 88)

Liberian state. Lancaster's paper on the Goba is marred by a map that shows much of southern Zambia as Goba territory and by privileging Goba accounts of their relationships with the neighboring Tonga of the Zambezi Valley and the Zambian Plateau. As one would expect, there are many oral histories, and the linguistic patterns of the region are a corrective to the Goba bias. The other studies deal with the Ekie and Bashu of Zaire, the western Rwandan frontier, a 19th-century Mallam state in the Ningi Mountains of northern Nigeria, several communities formed along the Juba River and elsewhere in Somalia in the late 19th century by Bantu-speaking escaped slaves, a 20th-century town in central Tanzania, and a suburb of Lagos whose population mushroomed after 1940.

The African Frontier is provocative and stimulating. Africanists will be arguing with it, amending it, and using it as a guide to further research and to reinterpretation of regional histories.

ELIZABETH COLSON
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Books Received

Conducting Polymers. Special Applications. Luis Alcaer, Ed. Reidel, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). x, 220 pp., illus. \$69. From a workshop, Sintra, Portugal, July 1986.

Conifers. Keith D. Rushforth. Facts on File, New York, 1987. 232 pp., illus., + plates. \$24.95.

Cross-Bedding, Bedforms, and Paleocurrents. David M. Rubin. Society of Economic Paleontologists and Mineralogists, Tulsa, OK, 1987. viii, 187 pp., illus. Paper, \$20; to SEPM members, \$16. Concepts in Sedimentology and Paleontology, vol. 1.

Denkschrift Astronomie. Deutsche Forschungsgemeinschaft. VCH, New York, 1987. xiv, 154 pp., illus. Paper, DM32.

Digital Filter Design. T. W. Parks and C. S. Burrus. Wiley-Interscience, New York, 1987. xviii, 342 pp., illus. \$32.95. Topics in Digital Signal Processing.

Directions in Engineering Research. An Assessment of Opportunities and Needs. Engineering Research Board, National Research Council. National Academy Press, Washington, DC, 1987. xxxii, 331 pp., illus. Paper, \$24.95.

Discover the Stars. Richard Berry. Harmony (Crown), New York, 1987. vi, 119 pp., illus. Paper, \$10.95.

Discovering Causal Structure. Artificial Intelligence, Philosophy of Science, and Statistical Modeling. Clark Glymour *et al.* Academic Press, Orlando, FL, 1987. xviii, 394 pp., illus., + floppy disk in pocket. \$39.50.

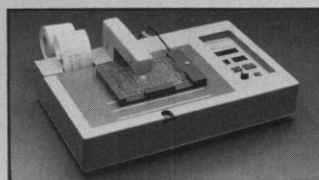
Engines of Creation. K. Eric Drexler. Anchor (Doubleday), New York, 1987. xii, 298 pp. Paper, \$8.95. Anchor Library of Science. Reprint, 1986 edition.

Environmental Impacts on Human Health. The Agenda for Long-Term Research and Development. Sidney Draggan, John J. Cohnsen, and Richard E. Morrison, Eds. Praeger (Greenwood), Westport, CT, 1987. xxviii, 229 pp., illus. \$39.95. Based on a meeting, Washington, DC, Sept. 1984.

Homosexuality and American Psychiatry. The Politics of Diagnosis. Ronald Bayer. 2nd ed. Princeton University Press, Princeton, NJ, 1987. viii, 242 pp. Paper, \$9.95.

(Continued on page 94)

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Products & Materials

Plotting and Analysis Software

Passage is a program for plotting and analyzing two-dimensional data. It accepts input of data generated by other programs. The program can scale and plot multiple sets of data, including data with asymmetric error values; analyze and manipulate data with routines that calculate integrals, Fourier transforms, and polynomial fits; and evaluate and plot analytically defined functions. Hard copy may be printed on either an ImageWriter or LaserWriter printer. Passage operates on Macintosh computers with at least 1 megabyte of memory. World Precision Instruments. Circle 541.

Cryogenic Refrigerators

Microminiature refrigerators that cool extremely rapidly are available. Temperatures as low as 85 K can be achieved in as little as 2 minutes by means of a proprietary gas mixture. Because vacuum insulation is not necessary, the refrigerators can cool medical specimens with high water content and chemicals with large vapor pressures. MMR Technologies. Circle 540.

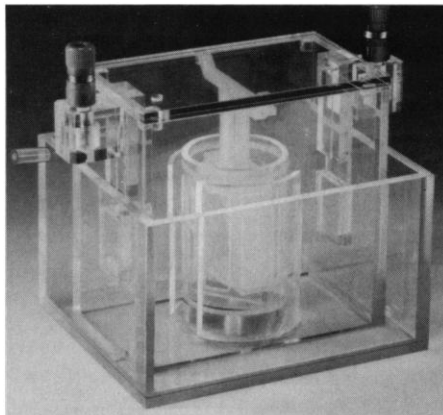
Data Acquisition and Control System

The ACRO 400E is a data acquisition and control system that includes BASIC and can operate independently from the host computer. The unit can be programmed by downloading a program from the host computer or by means of a dumb terminal. Programs can be stored in a static random-access memory with a battery backup. Data collected by the ACRO 400E may be uploaded to a host. The system has 16 differential analog inputs that accept thermocouples, high dc voltages, and process currents; it also has 32 digital input-output channels. The unit comes with software for the host computer. \$1895. Acrosystems. Circle 536.

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

Apparatus to Recover Samples

The Sample Saver recovers nucleic acids, proteins, and other samples after gel electrophoresis, preventing the overloading of sample on the membrane. The apparatus consists of an electrode bath with a positive and a negative electrode, a rotatable vessel between the electrodes, and a stationary holder



and reticulate support containing the gel slices. During electrophoresis, the vessel with the dialyzing membrane rotates, but the holder and gel slices remain stationary. The sample eluted from the gel remains in the buffer solution within the rotatable vessel. As a result, the pores of the membrane are not overloaded with the eluted molecules. Accurate Chemical & Scientific. Circle 533.

Universal File Translator

R901 is a menu-driven software program that allows data files to be transferred among programs with incompatible data formats. The program can read and write ASCII and binary data files in many formats, including those of DADiSP, dBASE III, Labtech Notebook, MathCAD, and Lotus 1-2-3. R901 operates on the IBM PC and PS/2 families and compatible computers. \$495. Rapid Systems. Circle 538.

Nucleic Acid Preparation

QIAGEN tips, packs, and tubes attach to pipettes or syringes to isolate and purify picogram to milligram amounts of plasmid DNA, λ DNA, or genomic DNA or RNA from cleared cell lysates. The disposable tips contain an anion-exchange resin for solid-phase extraction of nucleic acids. The 10-minute preparation technique has three steps: adsorbing the lysate to the resin,

washing away the impurities, and eluting the nucleic acid with buffer. Recovery rates are 90 to 98%. DIAGEN (West Germany). Circle 535.

Assay Calculation Software

AssayZap fits curves to assay data from radioimmunoassays, enzyme-linked immunosorbent assays, and immunoradiometric assays. An interactive visual curve-fitting technique permits all standard curves to be fitted. The program also features least-squares minimization routines for two-parameter log-logit fitting, as well as weighted and unweighted four-parameter fits. AssayZap maintains records of all assays processed and permits the current standard curve to be compared to past results. The program accommodates as many as 2000 samples, and each assay may include as many as four standard curves. AssayZap operates on Macintosh computers with at least 512 kilobytes of memory. U.S. \$249. Biosoft. Circle 534.

Ultraviolet Detector

The model 115 variable-wavelength ultraviolet detector detects wavelengths between 190 and 380 nm. Suitable for high-performance liquid, gravity-flow, and low-pressure chromatography, the detector has a sensitivity range from 0.0001 to 1.0 AUFS (absorbance units full scale) with a light path of 10 mm. Wavelength, sensitivity, event marks, and automatic zero are controlled from the front panel. Three outputs from the rear panel send detector output to a chart recorder and to a data analysis system. Gilson Medical Electronics. Circle 539.

Literature

Focal Points is a quarterly newsletter about microfiltration and ultrafiltration. Sartorius Filters. Circle 546.

1988 Analytical Supplies Catalog and Chromatography Reference Guide is a 248-page catalog of supplies for gas chromatography, high-performance liquid chromatography, and ultraviolet-visible and gas chromatography-mass spectroscopy instruments, including columns for gas and liquid chromatography, syringes, paper, chemical samples, robot supplies, filters, vials, and flowmeters. Hewlett Packard. Circle 549.

Catalog 871 features accessories and supplies for intraviolet-visible and fluorescence spectrophotometry. Wilmad Glass. Circle 555.

(Continued from page 92)

Immunology, Immunopathology, and Immunity. Stewart Sell. 4th ed. Elsevier, New York, 1987. xviii, 852 pp., illus. \$55.

In Vitro Culture of Higher Plants. R. L. M. Pierik. Nijhoff, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). vi, 344 pp., illus. \$110. Translated from the Dutch edition (1975).

Nonlinear Parameter Estimation. An Integrated System in BASIC. John C. Nash and Mary Walker-Smith. Dekker, New York, 1987. xiv, 493 pp., illus., + floppy disk in pocket. \$65. Statistics, vol. 82.

The Nuclear Oracles. A Political History of the General Advisory Committee of the Atomic Energy Commission, 1947-1977. Richard T. Sylvester. Iowa State University Press, Ames, IA, 1987. xviii, 319 pp. + plates. \$27.50.

The Physical World of the Greeks. S. Sambursky. Princeton University Press, Princeton, NJ, 1987. xiv, 255 pp. Paper, \$8.95. Reprint, 1956 edition. Translated from the Hebrew edition (Jerusalem, 1954) by Merton Dagut.

Recent Advances in Cytochalasins. G. S. Pendse, Ed. Chapman and Hall, London, 1986 (U.S. distributor, Methuen, New York). x, 191 pp., illus. \$85.

Red Sea. Alasdair J. Edwards and Stephen M. Head, Eds. Published for the International Union for Conservation of Nature and Natural Resources by Pergamon, Elmsford, NY, 1987. x, 441 pp., illus. \$32.95. Key Environments.

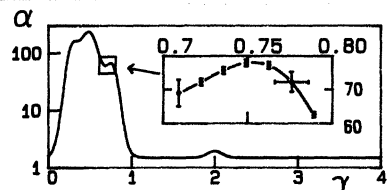
Responding to Changes in Sea Level. Engineering Implications. Committee on Engineering Implications of Changes in Relative Mean Sea Level, National Research Council. National Academy Press, Washington, DC, 1987. xii, 148 pp., illus. Paper, \$19.95.

Tumor Cell Differentiation. Biology and Pharmacology. Jarle Aarbakke, Peter K. Chiang, and H. Phillip Koeffler, Eds. Humana, Clifton, NJ, 1987. xvi, 347 pp., illus. \$64.50. Experimental Biology and Medicine. From a symposium, Tromsø, Norway, June-July 1987.

Visual Behavior in Salamanders. Gerhard Roth. Springer-Verlag, New York, 1987. xii, 301 pp., illus. \$110. Studies of Brain Function, vol. 14.

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Structure ad copy on a separate page, on lines of 52 characters and spaces. Include any desired heading. Each line of heading, and/or extra line spaces, and all partial lines (including centered reply information) are counted as full lines. Ad titles located within the text are printed in boldface caps and are only 32 characters per line. In ESTIMATING the cost, multiply total lines \times \$38.00 = approximate cost of ad. (This is an approximate cost ONLY. Allow for variation between estimated lines and actual typeset lines and the resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment.)

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Physiologist, M.D. Research experience in nephrophysiology (hemodynamics, endocrinology). Clinical experience in general internal medicine. Teaching experience in medical physiology. Box 31, **SCIENCE**.

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ASSISTANT PROFESSOR

A position is available in a well-funded group doing cardiovascular research at Louisiana State University Medical Center (LSUMC) in New Orleans. Research is focused in the area of lipoprotein metabolism at organismal, cell and molecular levels. Expertise in lipoprotein biochemistry, immunology or cell biology is preferred. An individual laboratory, technical assistance and competitive salary are provided. Please submit a letter of application with curriculum vitae, reprints or preprints of recent experimental work and the names of three references to: **Dr. Paul S. Roheim, Department of Physiology, LSU Medical Center, 1542 Tulane Avenue, New Orleans, LA 70112-2822. LSUMC is an Equal Opportunity/Affirmative Action Employer.**

Pulmonary Division, University of Pittsburgh School of Medicine. Tenure/nontenure-track position at the **ASSISTANT PROFESSOR** level available for Ph.D. with a strong background in cellular physiology and biochemistry. The candidate would be expected to pursue an independent research program, as well as collaborate with M.D.'s interested in the role of soluble mediators of inflammation elaborated by neutrophils, macrophages and lymphocytes in a variety of parenchymal lung diseases. Experience in tissue culture, ultrastructure, and lipid and protein identification/purification is desired. Applicants should submit curriculum vitae, a statement of research interests, and three letters of reference to: **James Dauber, M.D., Pulmonary Medicine, 440 Scaife Hall, Pittsburgh, PA 15261.**

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Applicant must develop a strong research program and obtain independent grant support. Some participation in departmental teaching will be expected. Competitive salary and reasonable start-up funds are available.

Send curriculum vitae and three letters of reference to: **Dr. B. R. Brinkley, Professor and Chairman, Department of Cell Biology and Anatomy, The University of Alabama at Birmingham, Birmingham, AL 35294.**

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The Department of Anatomy of the University of Kansas Medical Center is seeking a tenure-track **ASSISTANT PROFESSOR** for 1 July 1988. Background required is a Ph.D. and/or M.D. degree, and at least 2 years of postdoctoral experience in cellular, developmental, or neurobiology. Teaching responsibilities are in gross anatomy for allied health students. The successful candidate will demonstrate potential to develop an independent research program in one of the above areas. Salary and seed money are negotiable. Send curriculum vitae, several recent reprints, and letters from three references to: **Robert M. Klein, Ph.D., Department of Anatomy, University of Kansas Medical Center, 39th and Rainbow Boulevard, Kansas City, KS 66103.**

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ASSISTANT PROFESSOR IN ANIMAL REPRODUCTION AND SHEEP MANAGEMENT

The Department of Animal Science at Iowa State University (ISU) is seeking applicants for a faculty position to teach sheep enterprise management, reproductive physiology and to do related applied research. Ph.D. in animal reproductive physiology or related area and strong understanding of sheep production are essential. Applicants should forward a résumé including transcripts, and arrange for three letters of reference sent to: **Dr. S. A. Ewing, Head, Department of Animal Science, Iowa State University, Ames, IA 50011.** *ISU is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR IN AREA OF MOLECULAR BIOLOGY—PROTEIN SYNTHESIS

The Department of Animal Science at Iowa State University (ISU) is accepting applications for a position in molecular biology utilizing state-of-the-art techniques to study protein synthesis with possible applications in food producing animals. The successful candidate will have ample opportunity to interact with molecular biologists in several departments who are studying protein metabolism and gene regulation. The individual will be expected to complement and interact with current research in the nutritional physiology group which includes in vivo kinetics of metabolism of nutrients. Ph.D. in animal science, biochemistry, molecular biology, or a closely related field of science is essential. Candidates should submit a résumé, including transcripts and publication lists, and arrange to have three letters of reference sent to: **Dr. S. A. Ewing, Head, Department of Animal Science, Iowa State University, Ames, IA 50011.** *ISU is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR DEPARTMENT OF BIOLOGY UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL (UMMC)

The department invites applications for the first of several new tenure-track positions that will be available. We are seeking an individual who will establish an independent research program involving cellular and molecular approaches to problems of biological function. The department has a strong interest in the areas of cell proliferation, regulation, differentiation, and development. The successful candidate will be expected to participate in the teaching of medical or graduate courses. Generous office and laboratory space and start-up funds will be made available. A Ph.D. degree or equivalent and postdoctoral experience are required. Applicants should send curriculum vitae, statement of research objectives, and names and addresses of four individuals from whom references could be requested to: **Faculty Search Committee, Department of Cell Biology, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA 01655.** Deadline for applications is 15 May 1988. *UMMC is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR IN FOODS

The Foods and Nutrition Division seeks applicants for a 9-month, tenure-track position starting 21 August 1988. Responsibilities include developing independent research program in an area of foods research, teaching and advising undergraduate and graduate students. Ph.D. in foods, food science, or closely related field required; teaching experience, demonstrated research ability preferred. Send curriculum vitae, research interest statement, transcripts, and three letters of reference by 1 June 1988 to: **Dr. Sharon Nickols, Director, School of Human Resources and Family Studies, University of Illinois, 905 South Goodwin Avenue, Urbana, IL 61801.** *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR, MOLECULAR GENETICS

The University of Mississippi Department of Biology invites applications for a tenure-track assistant professor position in molecular genetics, research emphasis open, to begin August 1988. Salary open, depending on qualifications. Teaching duties will include an undergraduate course in general genetics and one or more additional courses in specialty. The successful candidate will be expected to establish an extramurally funded research program. Ph.D., and publication record in molecular genetics required; postdoctoral experience preferred. The department consists of 18 faculty members, and offers a variety of research programs leading to the M.S. and Ph.D. degrees. Submit letter of application, curriculum vitae, and three letters of recommendation by 1 June 1988 to: **Dr. Craig A. Busack, Genetics Search Committee, Department of Biology, University of Mississippi, University, MS 38677.**

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ASSISTANT PROFESSOR OF MICROBIOLOGY

This tenure-track position is available immediately. Candidates should have a Ph.D., M.D., D.D.S., or an equivalent degree and at least 2 years of postdoctoral training. Preference will be given to applicants with research interests in immunology, especially molecular aspects of the immune response, or in genetics of microbial pathogenicity. A broad background in medical microbiology is desirable. The appointee is expected to conduct vigorous independent research and to teach microbiology to students of medicine, dentistry, and other health-related professions. Laboratory space and start-up support will be provided. Salary is negotiable. Interested persons should send curricula vitae, brief descriptions of research interests, and the names and addresses of three referees from whom the applicant has solicited letters of recommendation. All materials should be sent to: **Dr. Thomas D. Flanagan, Professor and Chairman, Department of Microbiology, School of Medicine and Biomedical Sciences, State University of New York at Buffalo, 205 Sherman Hall, Buffalo, NY 14214.** Target date for receipt of applications is 1 June 1988. *State University of New York is an Affirmative Action/Equal Opportunity Employer.*

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ASSISTANT PROFESSOR OF PHARMACOLOGY position available at the Southeastern College of Osteopathic Medicine with joint appointment in the new Southeastern College of Pharmaceutical Sciences.

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Two positions, 10-month appointment, Ph.D. required, postdoctoral experience desirable. **ASSISTANT PROFESSOR, PROTEIN CHEMIST**, to study structure-function relations of food proteins. Search Chair: **Dr. B. P. Wasserman.** **ASSISTANT/ASSOCIATE/FULL PROFESSOR, SENSORY SCIENTIST**, to conduct research in area of sensory food science such as physiology, psychology, psychophysics, olfaction, or taste and supervise sensory evaluation laboratory. Search Chair: **Dr. T. J. Montville.** Successful candidates will initiate strong independent research programs and teach graduates and undergraduates. Submit curriculum vitae, brief description of research plans, and the names, addresses and telephone numbers of three references by 15 May 1988 to: respective search chair, **Department of Food Science, Rutgers University, New Brunswick, NJ 08903.** *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT/ASSOCIATE PROFESSOR OF ANATOMY AND CELL BIOLOGY

The Department of Anatomy and Cell Biology at Wayne State University invites applications for a tenure-track position at the assistant/associate professor level. The department is seeking an individual whose research will complement the interests of the present faculty. The two major areas of research are developmental neurosciences and vision research. Applications are invited from candidates utilizing genetic, molecular or cellular methodologies. The successful candidate will be expected to participate actively in the teaching program and to establish a funded, independent research program. Excellent start-up funds and laboratory space are available. Intra- and Interdepartmental collaboration is fostered by a core vision grant to the department and a neurosciences program project. Applicants should have a Ph.D. or an M.D. degree, and several years of postdoctoral training. Please submit a covering letter with curriculum vitae and the names of three references to: **Dr. Harry Maisel, Chairman, Department of Anatomy and Cell Biology, Wayne State University School of Medicine, 540 East Canfield, Detroit, MI 48201.**

Affirmative Action/Equal Opportunity Employer

ASSISTANT/ASSOCIATE PROFESSOR CELLULAR/MOLECULAR NEUROBIOLOGY

The Department of Neurobiology and Physiology, Northwestern University, invites applications and nominations for a tenure-track faculty position at the rank of assistant or associate professor beginning the fall of 1989. Outstanding applicants working in any area of neuroscience will be considered, although candidates working in cellular or molecular neurobiology are particularly encouraged to apply. There are 21 faculty in the department with research programs in sensory neurobiology, neuroendocrinology, development, and plasticity. The department participates in four NIH training programs, two NIH program projects and the University's Interdepartmental Graduate Program in Neuroscience consisting of 65 faculty. Our department and the Department of Biochemistry, Molecular Biology and Cell Biology form the life sciences division at the Evanston campus. Applicants should have a Ph.D. or M.D. and have completed postdoctoral training. Curriculum vitae, list of publications, a description of current and future research, and three letters of recommendation should be sent to:

**Dr. Joseph S. Takahashi
Department of Neurobiology and Physiology
Northwestern University
2153 Sheridan Road
Evanston, IL 60208**

Consideration of applications will begin on 29 April 1988. *Northwestern University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR OF PHYSIOLOGY. The Department of Physiology, Medical University of South Carolina seeks candidates for a position of assistant or initial associate professor. The department is interested in applicants with research emphasis in molecular biology or cellular physiology who can develop an active research program, either independently or in collaboration with other departmental research in neuroscience, circulatory shock, neuroendocrinology, and cell biology. Candidates must have a Ph.D. and/or M.D., with demonstrated research excellence in previous postdoctoral or faculty positions. Applicants should send curriculum vitae, a statement of research interests, and three names of references to: **Dr. J. G. Ondo, Interim Chairman, Department of Physiology, Medical University of South Carolina, Charleston, SC 29425.**

ASSISTANT OR ASSOCIATE PROFESSOR IN PHARMACOLOGY. Medical school, full-time faculty to participate in the pharmacology course for sophomore medical students and advanced courses for graduate students. An active research program with emphasis in molecular biology is highly desired, other areas of expertise will also be considered. Rank and salary negotiable depending on qualifications and experience. Starting date: 1 August 1988. Send curriculum vitae and three letters of recommendation to: **Dr. P. G. Iatridis, Northwest Center for Medical Education, 3400 Broadway, Gary, IN 46408. Indiana University is an Equal Opportunity/Affirmative Action Employer.**

ASSOCIATE IN PAIN MANAGEMENT, OREGON HEALTH SCIENCES UNIVERSITY SCHOOL OF MEDICINE

The Department of Anesthesiology at the Oregon Health Sciences University School of Medicine is recruiting for a full-time faculty member at the assistant professor level. The successful recruit will have an academic appointment in the School of Medicine, and will have teaching and research responsibilities in the Pain Management Center of our University Hospital. Candidates should have specific training (at least 3 months) in pain management and related research and should have experience in a multidisciplinary pain management center. Candidates should have an aptitude for research, demonstrated by primary authorship of peer-reviewed publications in the field of pain management and/or regional anesthesia. Ability to interact with basic and clinical scientists should be shown. Candidates should be certified by the American Board of Anesthesiology and have an Oregon medical license. Salary will be \$34,000 base per year, with overage from practice plan earnings. Interested candidates should send their curriculum vitae and the names of three references to: **Wendell C. Stevens, M.D., Professor and Chairman, Department of Anesthesiology, Oregon Health Sciences University, Portland, OR 97201.**

ASSOCIATE SCIENTIST FLOW CYTOMETRY

Cetus Corporation is seeking a Flow Cytometry Specialist to run a Coulter EPICS V dual laser cell sorter in the Immunology Department. This individual will be responsible for development of sophisticated methods for interpretation of complex data, development of new techniques and applications of flow cytometry in various areas of the biological sciences, and operation and maintenance of the flow cytometry system. Familiarity with current literature, performing literature searches, and contributing original research are also essential functions. We require an M.S. in immunology, biology or the equivalent. In addition, candidate must have medical research background with demonstrated ability to perform independent and creative research. Effective collaboration with other research staff, previous experience in immunological research, and familiarity with the EASY 88 computer system are essential. We require a minimum of 2 years of experience in the above areas. The salary range for this position will be \$37,000 to \$45,000 depending on background and experience. Résumés and responses must be postmarked no later than 1 May 1988 to be considered. If offered employment, you must show you have the legal right to work in the United States. For immediate consideration, please send curriculum vitae to: **Cetus Corporation, Box KRA, 1400 Fifty-third Street, Emeryville, CA 94608. We are an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

ASSISTANT/ASSOCIATE OR FULL PROFESSOR, tenure-track to begin 1 July 1988. Full responsibility for teaching medical bacteriology to medical, public health and graduate students. Research interest in microbial pathogenesis is desirable. Send curriculum vitae and names of three references by 1 May 1988 to: **Dr. W. A. Siddiqui, Chairman, Department of Tropical Medicine and Medical Microbiology, University of Hawaii School of Medicine, 3675 Kilauea Avenue, Honolulu, HI 96816. Equal Opportunity Employer.**

ASSISTANT, ASSOCIATE, OR FULL PROFESSOR, Departments of Horticulture and Soil Science, University of Wisconsin-Madison, Madison, Wisconsin, 53706. We seek a multidisciplinary talent to develop and teach courses on the dynamics of nutrient uptake, transport and utilization by plants. A multidisciplinary research program to model soil-plant-atmosphere systems is essential. Application deadline is 1 May 1988. Contact: **Warren H. Gabelman, Department of Horticulture, University of Wisconsin-Madison, Madison, WI 53706. Telephone: 608-262-1490.**

ASSOCIATE DEAN FOR RESEARCH/ASSOCIATE DIRECTOR COLLEGE OF AGRICULTURE UNIVERSITY OF MISSOURI-COLUMBIA

Applications are invited for the position of Associate Dean for Research, College of Agriculture and Associate Director, Agricultural Experiment Station.

The Associate Dean/Associate Director is responsible to the Dean and Director for leadership in the administration, supervision, coordination and development of the research programs in Agriculture. These responsibilities include working with over 250 faculty members, department chairs in five colleges, 21 departments, and eight outstate centers, campus and system-wide administrators, agricultural and agribusiness clientele and national research leaders. The Associate Dean represents the Missouri Agricultural Experiment Station in state, regional and national settings relating to agricultural research.

Candidates should have an earned doctorate in an appropriate field of agricultural science, demonstrated success in an administrative role and a record of research and educational excellence in their own discipline. The individual must be able to provide leadership for the development of a comprehensive and innovative research program that seeks to enhance fundamental knowledge as well as to integrate the biological, physical, and social science disciplines into mission-oriented, problem-solving research agendas.

Send nominations or applications by 29 April 1988 to:

**Dr. Gary Allee, Chair
Search and Screening Committee
College of Agriculture
University of Missouri-Columbia
2-69 Agriculture Building
Columbia, MO 65211**

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

BIOLOGY. ASSISTANT PROFESSOR position in the tenure-stream beginning September 1988. Ph.D. required. Area of expertise: vertebrate zoology. Teaching responsibilities include: introductory biology, human anatomy, and physiology. Candidates must have a strong professional interest in undergraduate learning. Send curriculum vitae, three letters of reference, and a statement of teaching and research interests and experience to: **Dr. Osiris Boutros, University of Pittsburgh at Bradford, Bradford, PA 16701. Application deadline: 29 April 1988. Affirmative Action/Equal Opportunity Employer.**

PIEDMONT COLLEGE BIOLOGY INSTRUCTOR

Piedmont College, a small private, liberal arts college, invites applications for a teaching, tenure-track position in biology, 1 September 1988. M.S. required, Ph.D. preferred. Emphasis in cell/molecular biology or genetics. Teaching duties include cell biology, genetics, general biochemistry, support courses for allied health fields, and introductory level courses. Send curriculum vitae, transcripts, and three letters of reference by 30 April 1988 to: **Dr. Carlos D. Camp, Department of Biology, Piedmont College, Demorest, GA 30535.**

POSITIONS OPEN

ASSOCIATE DEAN FOR RESEARCH AFFAIRS COLLEGE OF GRADUATE HEALTH SCIENCES UNIVERSITY OF TENNESSEE, MEMPHIS

Responsibilities: develop and maintain direct contact with funding agencies, improve researchers' ability to compete for funding, negotiate with funding agencies, assist faculty in preparing for site visits, review financial as well as other aspects of all research funding requests submitted from the university, direct all technology transfer activities for this university, and provide leadership in developing campus policies governing extramurally funded research.

Requirements: Advanced degree in health or biomedical sciences, with 3 to 5 years of experience in an academic environment.

Applications must be received by 1 May 1988. Please send résumé and salary requirements to:

**Raymond H. Cypess
Dean, College of Graduate Health Sciences
University of Tennessee, Memphis
62 Dunlap, Room 412
Memphis, TN 38163**

*The University of Tennessee is an
Equal Opportunity, Affirmative Action Employer.*

The American Type Culture Collection is seeking an **ASSOCIATE DIRECTOR FOR SCIENCE**, a key leadership job for enhancement of the research potential of ATCC while keeping in balance the traditional service role of the institution.

Candidates should have a doctoral degree in molecular biology or related discipline, a proven record of grant support research, and experience in management of diverse scientific personnel.

The position will be responsible for guidance and supervision of the departments of bacteriology, bioinformatics, cell culture, molecular and plasmid biology, mycology and botany, protistology, applied sciences, and virology.

Salary commensurate with experience. Send résumé to: **Personnel Administrator, Department SC, 12301 Parklawn Drive, Rockville, MD 20852-1776.**

CHAIR IN FISHERIES OCEANOGRAPHY

Applications are invited for a recently established Chair in Fisheries Oceanography at Memorial University of Newfoundland. Research will focus on the marine fish ecosystem dynamics off the Newfoundland and Labrador coasts with emphasis on the effects of physical processes and their anomalies on the availability and abundance of commercial species in offshore and coastal regions.

This position will be filled by an established scientist at the full professor level, with tenure in an appropriate academic department. Applicants should have a demonstrated ability to direct a multidisciplinary research program that embraces physical, chemical, and biological oceanography and marine meteorology.

The chair carries a generous research grant for personnel and equipment. Significant contributions to the solution of scientific questions pertaining to fisheries management will be expected. Research activities will be conducted in close cooperation with industrial sponsors, researchers at the federal government's Northwest Atlantic Fisheries Centre, and a strong university group of physical, biological, and chemical oceanographers. The chair should enable Canada to enhance its participation in international collaborative fisheries research through bodies such as ICES.

In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada but all others are encouraged to apply.

Enquiries or applications, with the names of three referees, should be sent to:

**Dr. L. P. Visentin, Dean of Science
Memorial University of Newfoundland
St. John's, Newfoundland, Canada
A1B 3X7
Telephone: 709-737-8153
Facsimile: 709-737-4569; Telex 016-4101
Email: NICOS**

MOLECULAR VIROLOGY AT THE UNIVERSITY OF ROCHESTER

DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY LEADERSHIP FACULTY POSITION

The Department of Microbiology and Immunology at the University of Rochester is undergoing a major development which includes new space, added budget for equipment, and expansion of the graduate program. We are planning to recruit a group of virologists over the next few years in order to maintain and build strength in virology as present members retire.

We are presently seeking an established virologist who can provide leadership in developing the virology program in research and also in education for graduate, medical, and undergraduate students. We are looking for a person with a strongly molecular approach to the study of basic questions in animal virology. A person doing research in human retroviruses would be particularly welcome, but other research specialties will be seriously considered. A strong record of funding is required.

The individual chosen will play a leading role in determining the future of the virology programs at Rochester, including the recruitment of additional virologists. There are a number of opportunities at the University of Rochester for intellectual interaction and possible collaboration, including active programs in human papilloma viruses, avian retroviruses, clinical aspects of cytomegalovirus and of flaviviruses, enteric viruses in newborns, and drug testing and a vaccine center for HIV.

The present faculty includes 21 members with full-time, primary appointments. There is a growing graduate program, with more than 40 PhD candidates currently enrolled.

Applicants should submit a complete curriculum vitae, including the names of three references to:

**Virology Search Committee,
Department of Microbiology and Immunology,
Box 672
University of Rochester, NY 14642.**

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

Professor and Head Department of Anatomy

The University of Calgary Faculty of Medicine invites applications and nominations for the position of Head of the Department of Anatomy. In this Faculty, anatomy is taught within an integrated curriculum emphasizing problem-solving and comprehensive treatment of body systems. In recent years there has been substantial development of biomedical research with support from government agencies and foundations including The Alberta Heritage Foundation for Medical Research.

The applicant must have a PhD, MD or equivalent degree, be recognized internationally for contributions to biomedical research, have experience in medical education and have demonstrated strong leadership and administrative abilities. The successful candidate will be expected above all to be an outstanding scientist with a strong independent research programme; to promote the academic strength and vitality of the Department of Anatomy; to attract research funding and trainees to the Department; and to recruit outstanding scientists and teachers to the Faculty. The successful candidate will also actively pursue and encourage the teaching of anatomy and the essential role of the Department as appropriate in integrated curricula for undergraduate and graduate students.

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

Applications and nominations, including a curriculum vitae, a statement of research interests and academic goals, and names of three references, should be forwarded by April 30, 1988 to:

**Dr. M. Watanabe
Dean, Faculty of Medicine
The University of Calgary
3330 Hospital Drive N.W.
Calgary, Alberta
Canada T2N 4N1**



PHARMACOLOGIST

Southern Research Institute is seeking candidates for a position in an ongoing research program on drug disposition and pharmacokinetics.

The successful candidate should have a doctoral degree in pharmacology, biochemistry, or other appropriate field. Requirements include a good understanding of the biological and chemical mechanisms that govern absorption, distribution, metabolism, and excretion of drugs; good analytical techniques in the analysis of biological fluids; and effective written and oral communication skills. Post-doctoral experience is not required.

A primary responsibility of this position is to evaluate the relationship between chemical structure and the physiological mechanisms that determine pharmacokinetic parameters in animals. The opportunity is available to develop and execute new research programs, especially in collaboration with scientists in other groups.

With a staff numbering over 700, Southern Research offers a stimulating work environment, generous benefits, modern research facilities, and an extensive technical library.

Qualified candidates should send their curriculum vitae to James G. Kerr, Personnel Office, Dept. B283, SOUTHERN RESEARCH INSTITUTE, P.O. Box 55305, Birmingham, AL 35255.

An Affirmative Action/Equal Opportunity Employer

Enzymologist/ Biochemist Ph.D.

Excellent research opportunity is available in our Molecular Biology Department for an Enzymologist/Biochemist to work with a team of molecular biologists, biologists and chemists to develop rational approaches to the discovery of anti-cancer and anti-viral agents. The research areas will be in the rapidly expanding areas of oncogenes, viral enzymology and mechanisms of signal transduction. Publication of results is strongly encouraged.

The successful candidate will have a Ph.D and at least 2 years of academic or industrial experience. Experience in state-of-the-art techniques for protein isolation, purification and characterization is essential. Experience with proteases will be highly valued.

Merck & Co., Inc. is the world leader in medical research offering excellent salary and benefits programs. This position is available at our West Point, PA laboratories located 25 miles northwest of Philadelphia.

Interested applicants are invited to submit their resumes to:

Mr. Jacques P. Kueny - W42-2

**Merck Sharp & Dohme
Research Laboratories**

West Point, PA 19486

EEO/AA/VH/Employer



Merck & Co., Inc.

The University of Rochester School of Medicine and Dentistry DEAN'S PROFESSOR OF IMMUNOLOGY

The Cancer Center and the Department of Microbiology and Immunology of the University of Rochester School of Medicine and Dentistry invite applications and nominations for the tenured position of Dean's Professor of Immunology and Head of the Immunology Unit of the Cancer Center. The major responsibilities of this appointee are to conduct a distinguished research program in cellular/molecular immunology and to strengthen the research and educational facets of the immunology program of the University through interaction with other faculty members in collaborative and supportive ways. Some administrative responsibilities as Unit Head are part of the job description. Facilities and University financial support (salary, benefits, and discretionary funds) for this position are excellent as are the laboratories and supporting facilities of the Unit and Department. The immunology program is strengthened by USPHS pre- and/or postdoctoral training programs in basic immunology, clinical immunology, psychoneuroimmunology, and the immunology of aging.

Qualified applicants should submit a *curriculum vitae*, including names of at least 4 references by April 15 to:

Dr. Nicholas Cohen
Director, Division of Immunology
Chairman, Search Committee
Department of Microbiology & Immunology
Box 672
University of Rochester Medical Center
Rochester, NY 14642

*The University of Rochester is an
Equal Opportunity Employer.*

MICROBIOLOGIST

The Research and Environmental Department of Texaco has an immediate opening for a Ph.D. Microbiologist at our Beacon, New York laboratory.

The preferred candidate will be a creative, independent researcher, with a strong background in microbial physiology, some experience in microbial genetics, and a working knowledge of organic chemistry. The successful candidate will be involved in strain isolation, mutation and selection, and culture optimization in our Biotechnology Group. Good communication skills are essential and a willingness to interact with biochemical engineers, physical chemists and applications chemists is necessary. Qualified individuals should send their resumes in confidence to:

Employee and Public Relations Department
Texaco Inc.
P.O. Box 509
Beacon, N.Y. 12508

An Equal Opportunity/Affirmative Action Employer. Applicants who are not legally authorized to work in the United States need not apply.

NEW ZEALAND



TOXICOLOGIST FORESTRY RESEARCH CENTRE CHRISTCHURCH

The Forestry Research Centre, which is a division of the Forestry Research Institute, is located on the University of Canterbury campus at Ilam, close to the city of Christchurch. It is seeking a toxicologist with a good knowledge of wild animal control technologies and data handling to join a team of biologists involved in wild animal management studies.

The position involves:

- investigations into the response of a wide range of introduced mammals to acute toxins, particularly 1080, bait carriers, bait dyes and animal lures
- the investigation of alternate toxins to 1080 and of chemical control techniques
- the supervision of a modern laboratory established principally to analyse 1080 residue

The qualification desired is a PhD in toxicological science together with good exposure to undergraduate zoology.

Candidates need to be physically fit and must be prepared to spend some time in remote field situations.

Some assistance towards relocation expenses is available.

Applications together with a full C.V., should be sent as soon as possible to:

**Executive Officer,
Forestry Research Centre,
PO Box 31-011
Christchurch New Zealand.**

Research Pharmacologist

BURROUGHS WELLCOME CO., a leader in the research, development, and manufacture of pharmaceuticals, located in Research Triangle Park, NC, has an immediate opening for a Research Pharmacologist.

Main responsibilities will be (1) to initiate and execute novel CNS concepts and research programs leading to new drugs and (2) to participate in the management of programs leading to the development of agents useful in the treatment of mental and neurological disorders. A major emphasis will be on experience in areas of Neuropharmacology applied to studying novel neurochemical mechanisms in animal models of psychosis.

The ideal candidate should have a Ph.D. or equivalent in Neuropharmacology, Neurobiology or Neurophysiology and preferably 1-3 years of postdoctoral experience in appropriate areas. Experience in common laboratory techniques for the field, e.g., behavioral measurement, lesions, brain cannulations, chemical and electrical brain stimulation, *in vivo* neurochemistry applications is required. Some knowledge and experience with electrophysiology would be helpful. Knowledge of state-of-the-art techniques and theory necessary to do innovative research and drug development using animal models of psychosis and testing for antipsychotic drugs.

BURROUGHS WELLCOME CO. offers an excellent benefits package and salary is commensurate with experience. Please send your resume to:



Wellcome

**Burroughs
Wellcome Co.**
Employment Supervisor
Position #1632
3030 Cornwallis Road
Research Triangle Park, NC 27709

An Equal Opportunity/Affirmative Action Employer



TISSUE CULTURE CHEMIST

SIGMA CHEMICAL COMPANY, employs hundreds of staff personnel at our St. Louis laboratory and manufacturing headquarters. Our biochemicals, diagnostic kits and reagents are distributed to a purty-conscious international market that relies on our integrity and professionalism. We have established a new and rapidly expanding line of tissue culture products. Several career opportunities to join this development team at Sigma now exist.

General requirements to join this development team include:

- An energetic and committed work ethic
- Minimum BS in science field with relevant and preferably broad academic and/or industrial experience
- Strong communication skills

In our Tissue Culture Production and Quality Assurance groups we are looking for people with the following specific experience:

- General tissue culture lab experience
- Scientific writing
- Sterile filtration
- GMP validation
- GMP compliance

We can provide a competitive salary and a full company-paid benefits package. Send your confidential resume and salary history to:

Tissue Culture Chemist
SIGMA CHEMICAL COMPANY
P.O. Box 14508 • St. Louis, MO 63178

SIGMA
CELL CULTURE
REAGENTS™

An Equal Opportunity Employer

THE SPACE ASTROPHYSICS LABORATORY of the INSTITUTE FOR SPACE AND TERRESTRIAL SCIENCE,

a newly formed research entity at York University in Toronto, Canada, is hiring post-doctoral research scientists within the following research areas:

- (1) **PLANETARY ATMOSPHERES:** participate in ground-based observing programs on the giant planets using modern imaging and spectroscopic techniques; future opportunities to participate in both Galileo and Hubble Space Telescope projects will be available.
- (2) **STELLAR AND GALACTIC SPACE ASTRONOMY:** establish a program of extra-solar system research using current, archival and future data from observatories in space.
- (3) **LABORATORY ASTROPHYSICS:** extend spectroscopic results from ambient conditions to lower temperatures characteristic of some extra-terrestrial environments.

In addition to their specific research, these scientists will also participate in the general goal of the Laboratory to promote the advancement of astronomical research in Canada using space facilities. Development of ground-based instruments, as proto-types for later space missions, may be included in Laboratory activities. It is expected that at least one person will be hired in each of the three areas described above. One of the persons hired may be senior. The positions are non-tenure track, with an initial appointment of one year, a probable continuation for a second year, and a reasonable possibility of longer duration, depending on funding. Please send applications including resume, names and telephone numbers of three to five personal references, and research experience and interests for the future to:

**Dr. John Caldwell,
Physics Dept.,
York University,
4700 Keele Street,
North York, Ontario M3J1P3
Canada**

These positions are available as soon as qualified candidates are found. In accordance with Canadian immigration laws, applications from qualified Canadian citizens or permanent residents will be considered first. If no such applications are received by May 1, 1988, others will be considered.

The Center for Environmental Management
at Tufts University
has the following three positions available:

DIVISION DIRECTORS **Site Assessment and Management** **Waste Reduction and Treatment** **Risk Assessment and Management**

The Tufts University Center for Environmental Management is seeking qualified applicants for the positions of Division Director for the following research areas: Site Assessment and Management; Waste Reduction and Treatment; Risk Assessment and Management. Within the particular division, each position will have primary responsibility to manage all phases of research, audit product quality, and relate to the needs of government industry and society. Division Directors will participate in overall Center planning development and management.

Major responsibilities include: managing division research projects conducted by Center staff and Tufts faculty; maintaining expertise in the field by performing research and by publishing and presenting professional papers; and/or participating in curriculum development and teaching in an appropriate department at Tufts. Qualifications include demonstrated skills and experience in: grantsmanship and developing and managing research; applying research experience to curriculum development and teaching; and communicating with peers in government industry and academia. Doctorate or equivalent in relevant area of expertise is required.

The Center for Environmental Management is a multi-disciplinary research education and policy institution seeking long term solutions to national and international environmental issues.

Please send two copies of resume to:
**Ms. Deanna Roberts, Tufts University,
Human Resources, 419 Boston Avenue,
Medford, MA 02155.**

An Affirmative Action Employer

TUFTS UNIVERSITY
medford/somerville

Research Professionals

Genentech, Inc., a leader in the field of biotechnology, has the following opportunities available at our South San Francisco headquarters.

Scientist Peptide Pharmacologist

We are seeking a highly motivated, innovative Peptide Pharmacologist to study the role of neuropeptides in inflammation. You'll need a Ph.D. and a minimum of 2 years' post-doctoral training with experience in radioimmunoassays and animal models.

Postdoctoral Researcher

We are also seeking a Cell Biologist with experience in cloning techniques to participate in a program to study cell transformation. You will need a BS/MS in Cell Biology, Molecular Biology or equivalent with a minimum of 2 years' experience.

Genentech, Inc. offers an excellent salary and benefits package coupled with the opportunity to make a significant contribution to our organization. Please send resume to: Eric Mankuta, Human Resources Dept. 1289, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. An equal opportunity employer.

**Genentech, Inc.
Genentech, Inc.
Genentech, Inc.
Genentech, Inc.
Genentech, Inc.**

Careers In Scientific Computing

Smith Kline & French Laboratories, an international leader in the health care industry, is seeking scientific data processing professionals for our state-of-the-art computing environment. We have an opening for an experienced scientific computing specialist to provide programming and systems development for the Molecular Research Computing group in Information Sciences.

PRINCIPAL SCIENTIFIC ANALYST - The primary responsibilities for this position would include expert programming and systems development for R&D chemical and macromolecular information database management and research applications software systems. A M.S. or Ph.D. in an appropriate field of chemistry, biochemistry or biology with extensive scientific programming/computing experience (a minimum of 6 years post-BA/BS) is required. Extensive programming experience with at least one high-level language (Fortran, C, Pascal), strong communications and interpersonal skills, and the proven ability to work in a team-oriented scientific computing environment are essential. Familiarity with the DEC VAX/VMS operating system is also desirable.

Smith Kline & French Laboratories is located near Valley Forge, PA. We offer an excellent compensation and benefits package and an opportunity for personal and professional growth. Please submit resume and salary requirements to Barbara Schwartz, Associate Employment Administrator, S0030, SK&F Laboratories, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an equal opportunity employer. M/F/H/V. NO PHONE CALLS PLEASE.

SK&F
A SmithKline Beckman Company

POSITIONS OPEN

BIOLOGICAL SCIENTIST/STATISTICIAN—full-time, \$2328.26 per month salary. Monitor manatee population status. Design and coordinate aerial survey trend analysis studies and assess population modeling techniques. Statistically analyze and recommend data collection methods to correct for sightability bias. Statistically analyze other pertinent data and prepare reports of findings. Send résumés to: **Bureau of Marine Research, Marine Mammal Section, 100 8th Avenue SE, St. Petersburg, FL 33701. Telephone: 813-896-8626.**

CELL/MOLECULAR BIOLOGIST

The Department of Anatomy and Cell Biology at Georgetown University, Washington, D.C., is seeking cell/molecular biologists to fill two tenure-track positions at the assistant or associate professor level, beginning 1 July 1988. Applicants should have completed postdoctoral training and be capable of establishing an independent research program supported with extramural funds. While the specific area of research is not as important as excellence, individuals who utilize molecular approaches in the study of the reproductive system are encouraged to apply. Curriculum vitae, representative publications, and the names of three referees should be sent to:

Dr. Martin Dym, Chairman
Department of Anatomy and Cell Biology
School of Medicine
Georgetown University
3900 Reservoir Road, N.W.
Washington, DC 20007

Deadline for application receipt is: 1 May 1988.
Georgetown University is an Equal Opportunity/Affirmative Action Employer.

CELLULAR IMMUNOLOGIST

The Department of General Surgery at Rush-Presbyterian-St. Luke's Hospital of Rush University invites applications for a full-time position as assistant professor and associate scientist. Interested applicants must have an M.D. and/or Ph.D. degree with experience in basic tumor and transplant immunology. Ongoing investigations include: phenotypic and functional characterization of tumor-infiltrating leukocytes, therapeutic potential of large granular lymphocytes in bone marrow transplantation, flow cytometric analysis of solid tumors, and predictors of rejection in renal and hepatic transplantation. Qualities of the successful applicant should include the ability to pursue a research program bridging basic laboratory investigation with clinically relevant problems in oncology and transplantation. Interested persons should submit curriculum vitae and three letters of recommendation to:

Steven G. Economou, M.D., Chairman
Department of General Surgery
Rush-Presbyterian-St. Luke's
Medical Center
1653 West Congress Parkway
Chicago, IL 60612

DIRECTOR LSU CENTER FOR ADVANCED MICROSTRUCTURES AND DEVICES

The Louisiana State University (LSU) Center for Advanced Microstructures and Devices (CAMD) invites applications and nominations for the position of director. The central research tool at CAMD will be an electron storage ring optimized for x-ray lithography and materials science research. The Center, which will be housed in a new building currently under design, will also include equipment necessary for materials preparation and characterization. The director preferably should be an internationally recognized authority in the experimental applications of synchrotron radiation and have experience in a modern materials program. The ideal candidate will also have had experience in the administration of a research center and must be fully qualified for tenured appointment at the full professor level in one of the constituent departments of either the College of Engineering or the College of Basic Sciences. Ph.D. required.

Salary and terms of appointment are open to negotiation. Applications, including curriculum vitae and the names and addresses of three professional references, should be sent to: **Dr. R. J. Henry, 338 Choppin Hall, Louisiana State University, Baton Rouge, LA 70803.**

This position will remain open until filled. *LSU is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

CHAIRMAN DEPARTMENT OF PHYSIOLOGY AND BIOPHYSICS

The University of Puerto Rico School of Medicine invites applications for the position of chairperson of the Department of Physiology and Biophysics. Candidates must have an outstanding record of research, a strong commitment to medical and graduate education, and the capability to direct the service missions of the department. Applicants must provide curriculum vitae, names of three references, and a statement of research interest by 29 April 1988 to:

Dr. José L. Cangiano, Chairman
Search Committee for Physiology
and Biophysics
Department of Medicine
Veterans Administration Hospital
G. P. O. Box 5800
San Juan, Puerto Rico 00927-5800

DIRECTOR MCGILL BIOTECHNOLOGY FACILITY (MBF) MCGILL UNIVERSITY

McGill University is establishing a state-of-the-art biotechnology facility that will provide services described below to the large and continually expanding group of McGill researchers working in some aspect of biotechnology. The major objectives of the MBF are to provide low cost, high quality services, initiate student training programs in biotechnology, promote multidisciplinary research projects, and encourage university-industrial interaction. Services to be provided in Phase I development of the MBF will include protein sequencing, peptide synthesis, protein purification, oligonucleotide synthesis, and computer analysis.

Applications are invited for the directorship of this new facility. Candidates must have a Ph.D. with specific experience in protein chemistry. *In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada, though others are advised and encouraged to apply.*

Send applications including curriculum vitae and names of three referees to: **Dr. R. A. Murgita, Director, Office of Biotechnology, 853 Sherbrooke Street West, Room 408, Montreal, Quebec, Canada H3A 2T6.**

DIRECTOR ARECIBO OBSERVATORY

The National Astronomy and Ionosphere Center (NAIC), Cornell University seeks Director for the Arecibo Observatory in Puerto Rico. The facility is a NSF-funded National Observatory for research in radio and radar astronomy and in atmospheric sciences. The main observing activity is centered on the 308-m reflecting telescope operating for radio astronomy in the frequency range 25 MHz to 3 GHz, and as a radar astronomy instrument and an atmospheric probing radar at 430 MHz and 2.3 GHz. A number of support research facilities are available, as are Harris and DEC main-frame digital computers with array processors and special purpose correlators for data-taking and data analysis. Plans for major upgrades of the observing facilities have been developed and are expected to be implemented during the next few years.

The main research topics include the properties of distant galaxies and our own, the interstellar medium, pulsars, flare stars, planetary surfaces, asteroids, comets, the solar wind, the earth's ionosphere, the mesosphere, the stratosphere and the troposphere. Each year 150 to 200 visiting scientists conduct their research at the Observatory in addition to the investigations carried out by the staff.

The applicant should be an active radio astronomer with a record of leadership in major radio science projects. Salary and benefits are competitive and attractive and will depend on the applicant's qualifications. Closing date for applications is 1 June 1988. Please submit the application with complete resume of academic, professional and personal data, including references, to:

Dr. Tor Hagfors, Director
NAIC
Space Sciences Building
Cornell University
Ithaca, NY 14853-6801

Cornell University is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

DIRECTOR—SCIENCE AND MATHEMATICS TEACHING CENTER CENTRAL MICHIGAN UNIVERSITY

Central Michigan University is seeking a Director of the Science and Mathematics Teaching Center. Tenure-track, associate or full professor rank. Ten-month appointment with half-time summer available. The Director is responsible for: (i) developing outreach programs with schools and teachers by scheduling workshops, seminars, and conferences; (ii) promoting and writing grants for educational projects; (iii) fostering CMU faculty development and interdisciplinary interaction; and (iv) administering and promoting the Center and the NASA Regional Teacher Resource Room. Candidates are required to have (i) an earned doctorate; (ii) evidence of successful grant writing; and (iii) experience working with in-service teachers or K to 12 classroom teaching experience. College teaching experience is preferred. Submit a letter of application, curriculum vitae, and the names, addresses, and telephone numbers of at least three references by 15 April 1988 to: **Dr. W. L. Merrill, Central Michigan University, Department of Teacher Education and Professional Development, 228 Ronan Hall, Mt. Pleasant, MI 48859. Central Michigan University is an Affirmative Action/Equal Opportunity Institution.**

DIRECTOR, SEISMOGRAPHIC STATIONS AND PROFESSOR UNIVERSITY OF CALIFORNIA AT BERKELEY

Founded in 1887, the Seismographic Stations are responsible for the development and conduct of research programs in seismology or related fields of geophysics as well as the collection, maintenance, and dissemination of information on seismic activity in northern California. The position will be tenured faculty appointment in an appropriate academic department with 50 percent release time for service as Station Director. To be considered, candidates must possess academic and research records of distinction and evidence of administrative experience or ability.

Nominations or applications with current résumés should be sent by 1 June 1988 to: **Professor James K. Mitchell, Chairman, Seismographic Stations Director Search Committee, c/o Provost for Research Office, 200 California Hall, University of California, Berkeley, CA 94720.**

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

DIRECTOR OF INSTRUMENTATION—Purdue University, Department of Chemistry, seeks an individual to coordinate the development of state-of-the-art research and teaching instrumentation. Responsibilities include the management of a large group of instrumentation specialists and working with the faculty, staff, and students to see that their measurement needs are met. The group is involved with tasks ranging from design, construction, and testing of new equipment to maintenance of, and training on, existing, commercial instrumentation. Candidates must have a Ph.D. in chemistry and should have experience in digital and analog electronics preferably with a strong emphasis on system design. Prior supervisory experience is essential. A résumé and three letters of recommendation should be sent by 1 June 1988 to: **Professor Harry Morrison, Head, Department of Chemistry, Purdue University, West Lafayette, IN 47907. Purdue University is an Equal Opportunity/Affirmative Action Employer.**

FACULTY POSITION COLUMBIA UNIVERSITY DEPARTMENT OF ANATOMY AND CELL BIOLOGY

The Department of Anatomy and Cell Biology seeks applicants for a tenure-track faculty position for a candidate with background and teaching experience in gross human anatomy, who is interested in participating in the development of computer-assisted instruction and is capable of establishing an independent research program in cell biology, cellular neurobiology, or a related area. Please send curriculum vitae, statement of research goals, and the names of three professional references to: **Dr. Michael D. Gershon, M.D., Chairman, Department of Anatomy and Cell Biology, Columbia University, College of Physicians and Surgeons, 630 West 168 Street, New York, NY 10032. Columbia University is an Affirmative Action/Equal Opportunity Employer.**

**NATIONAL INSTITUTE
OF ARTHRITIS AND
MUSCULOSKELETAL AND
SKIN DISEASES (NIAMS)
NATIONAL INSTITUTES OF HEALTH
PUBLIC HEALTH SERVICE**

The Section on Chemical Immunology of the Arthritis and Rheumatism Branch is seeking an MD trained in membrane biochemistry and molecular genetics with an interest in investigating the early events in IgE-mediated degranulation of mast cells at the molecular level. The Branch is part of the intramural program of NIAMS with major interests in autoimmunity, chronic inflammation and clinical investigations in autoimmune diseases. Applicants should have at least 3 years post-doctoral training/experience. He/she will be considered for a permanent career or career conditional appointment at the GS-13 level (\$48,162-59,787 p.a.). Applicants should send a curriculum vitae, bibliography, a short statement of research interests, as well as the names of three references to Henry Metzger, M.D., Director, Intramural Research Program, Bldg. 10, Rm. 9N240, NIAMS, NIH, 9000 Rockville Pike, Bethesda, MD 20892 (301-496-3375). U.S. Citizenship Required.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

RESEARCH IMMUNOCHEMIST/ IMMUNOLOGIST

A PhD level position is available within our Medical Products Department. This is an excellent opportunity for scientific and career development with a leader in diagnostic R&D. You will be a member of a group of scientists carrying out both research and product development in immunological areas related to clinical diagnostics. To qualify, you should hold a Ph.D., be well experienced in the preparation of monoclonal antibodies, and have expertise in immunochemical characterization techniques, such as affinity and crossreactivity determinations. One to two years of industrial or postdoctoral experience is a plus.

You'll find a highly stimulating scientific environment in a modern research facility located near Wilmington, DE. We provide excellent compensation and benefits including relocation. Wilmington's Mid-Atlantic location offers an attractive lifestyle with easy access to affordable housing and a wide range of academic, cultural and recreational activities. Interested candidates should send their resumes and references to: Professional Staffing, Employee Relations Department, Room X51138, Du Pont Company, Wilmington, DE 19898.



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

CELL/MOLECULAR BIOLOGIST

Merck Sharp & Dohme Research Laboratories, a world leader in the development of ethical pharmaceuticals for human health has an opening in a multidisciplinary group studying receptor biology with emphasis on structure-function relationships and on signal transduction.

The position will involve the use of biochemical as well as cell and molecular biological techniques. Qualified applicants should be highly motivated, have a B.S. or M.S. with extensive experience in at least one of the requisite areas and a desire to learn the others.

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

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

Equal Opportunity Employer



Merck & Co., Inc.

Research & Development Opportunities

Kinetek Systems Incorporated is an emerging leader in providing innovative equipment and systems for a range of laboratory, process and therapeutic applications in the biotechnology, pharmaceutical and health care industries.

Kinetek Systems Incorporated is seeking to augment its existing interdisciplinary team of scientists.

If you are oriented to the calculated risk/benefit of a high tech, fast growth venture company then you may wish to apply for one of the following Kinetek positions:

Senior Scientist/Program Leader

RESPONSIBILITIES:

- Expand, supervise and work with a group of dedicated and creative scientists conducting research on novel concepts for mammalian cell culture and protein purification.
- Guide the development of new and existing proprietary inventions into prototype products for customer evaluation.
- Coordinate invention and development activities with marketing and production groups.

QUALIFICATIONS:

- Ph.D. in the biosciences, bioengineering or related areas.
- 3-5 years' experience with responsibilities similar to those described.
- Significant communication and interpersonal skills.
- Growth potential and flexibility to handle assignments of diverse and increasing responsibility.

This position will report to the Vice President, R&D.

Kinetek is also actively recruiting creative, results-oriented **scientists and engineers** at all degree levels who are seeking fast track opportunities in the following areas:

Lab and Large Scale Development of Cell Culture: innovative techniques and systems for mammalian cell culture under GMP requirements.

Protein Chemistry/Biophysics/Bioprocess Engineering: development of new and improved equipment for separation and recovery of biological products under GMP requirements.

Bioanalytical & Bioprocess Control Systems: development of new techniques for rapid and precise analysis of proteins.

Kinetek, centrally located in low cost-of-living, high quality-of-life St. Louis, offers an excellent compensation and benefits package. For confidential consideration, please address inquiries to the attention of: **Director, Human Resources; Kinetek Systems Incorporated; 11810 Borman Dr.; St. Louis, MO 63146.** Equal Opportunity Employer.



"Converting creative energy into innovative products"



University Hospital

Immunologist/ Transplantation

Required: Ph.D. in Cell Biology and/or Immunology with particular reference to studies of histocompatibility, lymphocyte culture and function and membrane structures. Preferred: Full time experience in histocompatibility testing, including one year at supervisory level. UH #2032

Send resumes with UH #'s to: Department of Human Resources, University Hospital, Health Sciences Center, SUNY Stony Brook, Stony Brook, New York 11794-8300.

SUNY Stony Brook is an affirmative action/equal opportunity educator and employer.

Stony Brook

SENIOR RESEARCH CHEMIST

The Animal Drug Metabolism Department of Merck, Sharp & Dohme Research Laboratories is looking for a Senior Research Chemist. The position involves the study of plant and animal metabolism of pesticides and their environmental fate. The position requires a Ph.D. in medicinal chemistry, organic chemistry, biochemistry, or analytical chemistry with at least two years of postdoctoral experience. The candidate should have a broad knowledge of the theory of drug metabolism with demonstrated strengths in modern bioanalytical techniques, including HPLC and radioassay. Experience in the isolation of drugs and metabolites from biological samples and knowledge of metabolic pathways, computer data analysis, NMR, and MS are highly desirable.

The Agricultural Research Group of Merck, Sharp & Dohme Research Laboratories is located in Three Bridges, New Jersey, approximately 45 miles from New York City. Our salaries, benefits, and growth potential are excellent.

Interested candidates should submit a curriculum vitae with the names of three references and salary requirements to: **Ms. Dolores L. Barefield, Merck & Co., Inc., P.O. Box 2000, WBD-362, Rahway, New Jersey 07065.**

Equal Opportunity Employer



Merck & Co., Inc.

Molecular Biologist/Geneticist

The Agricultural Research Division of American Cyanamid Company currently has an opening for a molecular biologist/geneticist to join an energetic and growing Molecular and Cellular Biology Group.

This individual should possess an M.S. or B.S. and considerable laboratory experience. Working knowledge of molecular biological techniques is essential; experience in fungal genetics is desirable. This position offers an excellent opportunity for scientific growth and development.

American Cyanamid offers a competitive compensation and benefits package. For prompt and confidential consideration, qualified applicants should send their resume to the Employment Office.



American Cyanamid Company

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

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- ☐ \$65 USA ☐ \$97 Canada ☐ \$92 Foreign
- ☐ \$130 air-surface delivery via Holland

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- ☐ \$98 USA ☐ \$130 Canada ☐ \$125 Foreign
- ☐ \$163 air-surface delivery via Holland

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CURATORS

Virginia Museum of Natural History, the newly established state museum for the Commonwealth of Virginia, has seven curatorial positions open effective July 1, 1988, pending final approval. All positions require an active research program, collections development, exhibition consultation and participation in museum-university programs.

Mammalogy

Position requires a broad interest and research background in evolutionary biology of mammals, and preferably in molecular systematics of mammals. Specialty is open but other considerations being equal candidates with interests in small mammals, including primates, and/or the Americas and Africa will be given preference.

Earth Sciences

Position requires museological experience in geological collection management. Collection of some 20,000 rocks and minerals needs immediate curatorial attention. Preferred research specialty is geochronology, with background in mineralogy, petrology and/or geochemistry. Interests and training in historical geology or paleobiology an asset.

Invertebrate Paleontology

Preferred specialty is Cenozoic molluscan paleontology but geographical and taxonomic specialization open; current collections to be under the care of this curator are worldwide in extent and are in need of conservation, cataloguing, and expansion.

Invertebrate Biology

Position requires broad curatorial expertise in entomology and malacology; priorities are organization of state invertebrate survey, collection building, and cataloguing of collection; geographic specialty desired is eastern U.S. but additional experience an asset.

Herpetology

Specialist in reptiles and/or amphibians; position requires organization of state herpetological survey, collection building, and cataloguing of collections; geographic specialty desired is eastern U.S., but additional experience an asset.

Vertebrate Paleontology

Position requires active field research in Virginia or expertise in initiating such a research program; specialty is open but successful candidate likely to be in Mesozoic reptile or Cenozoic mammal studies; assistance in developing exhibition on research a priority.

Archaeology

Position requires an active field research program. Geographic and research specializations open. Position includes collections development, exhibition development, interaction with State Archaeologist, and assistance in graduate training.

Salaries and benefits competitive. Applications, including CV, research experience, and names of three references, should be received by May 10, 1988 directed to:

Dr. Noel T. Boaz, Director
Virginia Museum of Natural History
1001 Douglas Avenue
Martinsville, VA 24112

EOE/AEE

Immunology Cancer Research PhD/MS/BS

An Environment Designed for Discovery

OUR WALLINGFORD, CONNECTICUT WORLD HEAD-QUARTERS is the setting for important anti-cancer pharmaceutical research and development of new therapeutic agents at the highest level. Scientists from various disciplines are brought together in a unique team approach that inspires cooperation and individual accomplishment. Superior professional challenges are available in several areas:

RESEARCH SCIENTIST

PhD, postdoctoral training desirable, for a multidisciplinary program in signal transduction/gene regulation in T lymphocyte functions, and in growth regulation in tumor cells. Requires training in modern molecular biology techniques, and creativity and insight in application of these techniques.

RESEARCH ASSISTANT/ASSOCIATE

MS/BS for research in signal transduction/gene regulation in lymphocytes and tumor cells. Hands-on experience in modern *in vitro* techniques in cellular immunology and/or molecular biology desired.

RESEARCH ASSOCIATE/IMMUNOLOGY

MS/BS to study suppressor cell functions at the cellular and molecular levels. Requires 2-5 years experience with *in vitro* assays of T cell or B cell proliferation and differentiation in human or murine systems. Experience in any of the following is an asset: PAGE, HPLC protein purification, generation of monoclonal antibodies, cytometry, RIA and ELISA techniques.

IMMUNOLOGY/ANTI-CANCER DRUG RESEARCH

MS/BS to participate in research of monoclonal antibody-delivered anti-tumor drug therapy. Must have experience with *in vivo* model systems and techniques. Knowledge of basic immunology, biochemistry, tissue culture and monoclonal antibody production/characterization desirable.

RESEARCH ASSISTANT/ASSOCIATE Anti-Cancer Immunology

BS/MS in Biology or related field with experience in *in vivo* models of tumor immunity necessary. A strong background in *in vitro* assays of cell mediated immunity would be an additional asset. Will investigate the mechanisms underlying tumor specific immunosuppression, applying findings in identification of agents that alter the function of tumor-specific T cells.

BRISTOL-MYERS is a multi-billion dollar global competitor that pursues excellence in pharmaceutical research and development. Our strong, sustained growth, highly competitive salaries, extensive benefits and career support have helped us attract and keep the best people.

TO EXPLORE YOUR FUTURE in an environment designed for discovery, send resume with salary history to: **BRISTOL-MYERS COMPANY, Pharmaceutical Research & Development Division, Attn: HR3, P.O. Box 5100, 5 Research Parkway, Wallingford, CT 06492.**



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POSITIONS OPEN

FACULTY POSITION CULLEN EYE INSTITUTE BAYLOR COLLEGE OF MEDICINE

Applications are invited for a faculty position in a major eye institute for a scientist with an interest in the mechanisms regulating tissue growth. Qualified applicants must have a Ph.D. or M.D. degree with strong postdoctoral experience in basic research. Successful applicant will be expected to establish a vigorous independent research program in one of the following areas: (i) intraocular vascular proliferation, (ii) pigment epithelial cell proliferation and migration; or (iii) trophic factors, which would complement other research programs in vision and ophthalmology already underway in the department. Possibilities for joint appointments in an appropriate basic science department or graduate program in the college are desirable and encouraged. Rank and salary will be commensurate with experience and qualifications. Send curriculum vitae, a statement of research interest and names with addresses and telephone numbers of at least three references to:

Dr. Joe G. Hollyfield
Chairman, Search Committee
Cullen Eye Institute
Baylor College of Medicine
Houston, TX 77030

FACULTY POSITION (Assistant/Associate Professor [tenure-track] of Anatomy and Research Associate in Cancer Center Division) in the field of developmental biology, broadly related to cancer, to augment existing faculty group. Research in the areas of growth and regulatory factors, regulation of proliferation and differentiation, cytokines, cell-cell interactions, and the biology of tumor cells preferred; however, outstanding scientists in other areas will be considered. Candidates should have pertinent postdoctoral experience. Candidate will be expected to develop a nationally recognized independent research program and participate in teaching and service responsibilities of anatomy and Cancer Center. Anticipated interactions with current faculty include the areas of anatomy, molecular and cellular biology, biochemistry, immunology, and pharmacology. Submit curriculum vitae, two copies of recent publications, detailed description of research goals, and have three letters of reference sent by 15 April 1988 to: **Dr. Jeffrey M. Trent, Arizona Cancer Center, The University of Arizona, 1501 North Campbell, Tucson, AZ 85724.** However, applications will continue to be accepted until position is filled. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer and applications from females and minority group members are strongly encouraged.*

FACULTY POSITION IN PARASITOLOGY

The Department of Pathology at the College of Veterinary Medicine and Biomedical Sciences at Colorado State University invites applications, nominations and inquiries regarding a regular, full-time, tenure-track faculty position in parasitology at the assistant or associate professor level. Candidates should have a professional biomedical degree (D.V.M., M.D., D.D.S.) and/or Ph.D. degree in parasitology or a closely related field. Applicants will be evaluated by their demonstrable proficiency and excellence in research and ability to participate in and contribute to the department's responsibilities for professional and graduate teaching/training. The incumbent will also have an appointment in the Arthropod-borne and Infectious Diseases Laboratory on the Colorado State University campus. The academic rank and salary will be competitive and commensurate with the qualifications of the individual selected. Applicants should submit curriculum vitae, a detailed letter of intent and the names of three individuals from whom direct letters of professional reference have been requested. Applications will be accepted through 15 June 1988 or until a suitable candidate is identified. Address all correspondence to: **Dr. Robert Grieve, Search Committee Chairman, Department of Pathology, Colorado State University, Fort Collins, CO 80523.** *Colorado State University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

FACULTY POSITION (tenure-track) (Assistant/Associate Professor of Anatomy and Pediatrics) in the field of developmental biology of the gastrointestinal tract, liver or pancreas. However, outstanding scientists in other areas also will be considered. Candidates must have relevant postdoctoral experience. Assistant professor candidates will be expected to develop a strong, extramurally funded, independent research program. Associate professor candidates must have an established research program with demonstrated ability to secure extramural funding. Candidate will be expected to participate in teaching and service responsibilities in both anatomy and pediatrics. Submit curriculum vitae, two copies of recent publications, detailed description of research goals, and have three letters of reference sent by 15 April 1988 to: **Dr. Robert S. McCuskey, Professor and Head, Department of Anatomy, College of Medicine, The University of Arizona, 1501 North Campbell, Tucson, AZ 85724.** However, applications will continue to be accepted until position is filled. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer and applications from females and minority group members are strongly encouraged.*

FACULTY POSITION: The University of California at Berkeley expects to make one or more appointments to tenure-track positions in conjunction with the Lawrence Berkeley Laboratory's (LBL) Advanced Light Source (ALS). The ALS currently under construction at LBL will be a next-generation 1.5-GeV synchrotron radiation facility of unprecedented brightness and capability. The joint appointments will be 50% in a campus department and 50% at LBL. Candidates should specify the campus department by which they wish to be considered. Individuals are sought whose research interests can best exploit the capabilities of the ALS; who can provide an effective link between their research and student educational programs on campus; and who will complement the research efforts of others associated with this interdisciplinary synchrotron radiation facility. Candidates should send two copies of a statement of research interests, curriculum vitae, and the names of three references by 16 May 1988 to: **Professor M. A. Olmstead, Chair, Interdisciplinary Search Committee, c/o Department of Physics, University of California, Berkeley, CA 94720.** *The University is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION IN TOXICOLOGY UCLA SCHOOL OF PUBLIC HEALTH

The Division of Environmental and Occupational Health Sciences of the UCLA School of Public Health invites applications for a tenure-track faculty position in toxicology. Emphasis will be on an appointment at the professorial level although an appointment at the assistant or associate professor level will be considered. The candidate should have an established scientific reputation with national and international standing; a strong background in chemistry, biochemistry, or the basic biological sciences; and research interests in biochemical or environmental toxicology. The appointee will be responsible for expanding the research and teaching program in toxicology at the School of Public Health and will interact with faculty in the Division, the Southern Occupational Health Center and the Environmental Science and Engineering Program.

Qualified individuals should send curriculum vitae and the names and addresses of three references to: **Dr. John R. Froines, Chair, Search Committee, Division of Environmental and Occupational Health Sciences, UCLA School of Public Health, Los Angeles, CA 90024.** *The University of California is an Affirmative Action/Equal Opportunity Employer and will welcome applications from members of minority groups and women.* Applications will be received until 15 May 1988.

Under Federal law, the University of California may employ only individuals who are legally authorized to work in the United States as established by providing documents specified in the Immigration Reform and Control Act of 1986.

POSITIONS OPEN

FACULTY POSITION DEPARTMENT OF MICROBIOLOGY MARSHALL UNIVERSITY SCHOOL OF MEDICINE HUNTINGTON, WEST VIRGINIA 25704

MICROBIAL GENETICIST/MOLECULAR BIOLOGIST. Assistant to associate professor, tenure-track. Twelve-month appointment starting 1 July 1988. Applicant should have a Ph.D. and postdoctoral experience in microbial genetics, molecular biology and recombinant DNA techniques. The successful applicant will be able to participate with other faculty members in teaching a medical curriculum course in microbiology and to present an advanced course in microbial genetics in the graduate curriculum. This individual will also be expected to develop an independent research program in the field. Salary will be commensurate with experience. Submit curriculum vitae, summary of research interests, and names of three references by 15 May 1988 to: **Dr. Albert G. Moat, Professor and Chairman, Department of Microbiology, Marshall University School of Medicine, 1542 Spring Valley Drive, Huntington, WV 25704-2901.** *Marshall University, a state university of West Virginia, is an Equal Opportunity/Affirmative Action Employer.*

THE UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO FACULTY POSITION IN DEVELOPMENTAL BIOLOGY

Candidates are sought for a tenure-track faculty position at the assistant professor level, but appointments at a more senior level will be considered. The successful applicant will be expected to conduct a research program that combines classical, genetic and/or molecular approaches to problems in developmental biology. In addition, participation in the teaching activities of the Graduate Program in Developmental Biology and the Anatomy Department will be expected. Applicants should send curriculum vitae, bibliography with copies of publications, a summary of research plans, and names of three scientists willing to write letters of recommendation to: **Chairperson, Developmental Biology Search Committee, Department of Anatomy, University of California, San Francisco, CA 94143.** Applications should be received by 15 April 1988. *University of California, San Francisco, is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

TWO FACULTY POSITIONS IN FOOD SCIENCE AND NUTRITION. Assistant professor/associate professor, Department of Food Science and Nutrition, University of Minnesota, St. Paul. Tenure-track or tenured. Must have Ph.D. in nutrition or related field. Apply by 10 May 1988 to: **Dennis A. Savaiano, Chair, Search Committee, Department of Food Science and Nutrition, University of Minnesota, 1334 Eckles Avenue, St. Paul, MN 55108.** Telephone: 612-624-6232. Application includes curriculum vitae and names and addresses of at least three references. Start on or before 1 September 1988.

The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

FACULTY/RESEARCH SCIENTIST POSITIONS

Texas A&M University at Galveston is seeking ocean scientists in the areas of chemical, biological, and physical oceanography. Special interest areas include: photosynthetic processes and primary production, environmental chemistry, marine mammal studies, shelf and estuarine circulation, and development of new technology and analytical techniques. Scientists versed in field experimentation, analysis of satellite-derived measurements, and numerical modeling are encouraged. Both research faculty and tenure-track faculty positions are available.

Applications, inquiries, and nominations should be directed to: **William J. Merrell, President, Texas A&M University at Galveston, Post Office Box 1675, Galveston, TX 77553.** Telephone: 409-740-4403, ScienceNet/Telemail W. Merrell. *Texas A&M University at Galveston is an Equal Opportunity/Affirmative Action Employer.* Closing date is 30 April 1988.

POSITIONS OPEN

ImClone Systems Incorporated, an innovative, rapidly growing biotechnology company located in New York City, is seeking highly motivated individuals for vaccine development, generation of monoclonal antibodies, immunoassay development, and development of its proprietary DNA probe technology.

IMMUNOLOGISTS—Positions are available at the doctoral and research associate levels for individuals with demonstrated skills in the generation of B and T cell hybridomas. Relevant industrial experience would be an advantage. Several positions are also available at the B.S. level for persons with purification, PAGE, and immuno-diagnostic assay formatting experience.

DNA PROBE DIAGNOSTICS—Positions are available at the doctoral and research associate levels for individuals with demonstrated productivity in either cloning or nucleic acid chemistry and detection. Relevant industrial experience would be an advantage. Several positions are also available at the B.S. level.

ImClone offers excellent salary and benefits, and a challenging, multi-disciplinary environment for scientists who can assume both individual and team responsibilities.

Send CV to: **John Landes, ImClone Systems Incorporated, 180 Varick St., New York, New York 10014.**



ImClone Systems Incorporated

Aquatic Scientist

United Engineers & Constructors continues to serve the utility power industry across the United States. As a result, we are searching for an Aquatic Scientist experienced in ecology and fisheries with strength in physical and chemical oceanography/limnology. Familiarity with subtropical marine ecosystems essential.

The successful candidate will be responsible for the preparation of environmental assessments, EIS, and other licensing documents. Duties will include scoping and environmental monitoring, program specification, contract management, scientific quality assurance, data reduction, modeling, report writing, regulatory interface, client interaction, and expert testimony at public hearings.

We offer a competitive salary and an exceptional benefits program.

Please send resume to: **George E. Giberson, United Engineers & Constructors, 30 South 17th Street, P.O. Box 8223, Philadelphia, PA 19101. An Equal Opportunity Employer M/F/H/V.**

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MICROBIOLOGISTS/BIOCHEMISTS

ChemGen Corporation, a Rockville, Maryland based biotechnology company, specializes in bioprocess development for industrial chemicals. The company is seeking highly motivated candidates for scientific positions. This is an opportunity for you to grow with this rapidly expanding company. Qualified candidates should have a Ph.D. (or equivalent) in Biochemistry or Microbiology and 0-3 years' industrial/postdoctoral experience in one or more of the following areas of expertise:

- Microbe isolation and screening
- Identification and regulation of metabolic pathways
- Biotransformation of chemicals
- Microbial genetics
- Molecular biology
- Enzymology
- Microbial fermentation

Please send resume, in confidence, to
ChemGen Corporation, 2501 Research Boulevard,
Rockville, Maryland 20850

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an equal opportunity employer



The University
of
British Columbia

Department of Oral Biology

MOLECULAR BIOLOGIST/BIOCHEMIST

Applications are invited for a tenure track position at the level of Assistant Professor in the area of Molecular Biology/Biochemistry. The position will be available in the 1988-89 academic year and is subject to final budgetary approval. Applicants must have a D.D.S. or equivalent, and a Ph.D. in Molecular Biology or Biochemistry. The ideal individual would have a number of years of independent research and a proven record of attracting grant support. The most appropriate research experience would be in the area of interaction of microbes with oral tissues. Salary will be commensurate with experience. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. Applications should be received by June 1, 1988. Applicants should send a curriculum vitae, a summary of research interests, and the names and addresses of three references to Dr. Donald M. Brunette, Department of Oral Biology, Faculty of Dentistry, The University of British Columbia, 2199 Wesbrook Mall, Vancouver, B.C., Canada, V6T 1Z7.

POSITIONS OPEN

FACULTY POSITIONS IN MOLECULAR BIOLOGY AND MARINE NATURAL PRODUCTS CHEMISTRY

The Center of Marine Biotechnology of the Maryland Biotechnology Institute at The University of Maryland is seeking outstanding positions in molecular biology and marine natural products chemistry. There will be numerous opportunities to develop interdisciplinary and multi-disciplinary collaborative research programs with members of the faculty at the center. The successful candidates may be offered a joint appointment with an appropriate academic department at the University of Maryland. Candidates for the position in marine natural products chemistry should be established investigators who are interested in pursuing independent and collaborative research on products and process of marine organisms.

Successful candidates should have a Ph.D. and post-doctoral experience and will be expected to secure external funds to establish and maintain active research programs. Please submit a letter of application, curriculum vitae, names and addresses of three references to: **Dr. Thomas T. Chen, Center of Marine Biotechnology, University of Maryland, 600 East Lombard Street, Baltimore, MD 21202.** Applications will be accepted until the positions are filled. *The University of Maryland is an Equal Opportunity and Affirmative Action Employer.*

FACULTY POSITIONS MOLECULAR AND CELLULAR BIOLOGY LINEBERGER CANCER RESEARCH CENTER THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

Two tenure-track positions are open in the Cancer Center's interdisciplinary programs. Areas of particular interest include: the regulation of gene expression, oncogenes and neoplastic transformation, the regulation of growth and development, and DNA replication. Appointment to the Center, an academic department, and the graduate faculty will be at the level of assistant professor. Departmental affiliation will be determined by the applicant's credentials. Excellent laboratory space, start-up funds and salary available. Please send curriculum vitae and names of three references to:

H. Shelton Earp, M.D.
Associate Director
Lineberger Cancer Research Center
CB# 7295, Room 102
University of North Carolina
Chapel Hill, NC 27599

Affirmative Action/Equal Opportunity Employer.

INFRARED ASTRONOMER— ASTROPHYSICIST

The Smithsonian Institution's National Air and Space Museum is currently recruiting for a senior infrared astronomer/astrophysicist, salary range: \$39,501 to \$71,377, to establish and direct a well-rounded observational and interpretive program in infrared astronomy. Anticipated projects may involve satellite, airborne, balloon-borne or ground-based efforts. Access to Smithsonian Astrophysical Observatory telescopes will be on a competitive basis. Collaborative projects with other research groups within the Smithsonian and outside will be encouraged. The program will also devise occasional museum exhibits to present astrophysical advances to the public.

The successful candidates will have a distinguished record of observational and interpretive or theoretical astrophysical publication in the area of infrared astronomy, and will have experience in the construction and use of infrared astronomical equipment.

Interested applicants should mail a completed SF 171 (Application for Federal employment, curriculum vitae, and abstracts of three of their most significant publications to: **Smithsonian Institution, Employment Office, Washington, DC 20560.** Infrared Astronomer: \$39,501 to \$60,683. Attention: 88-148-T. Senior Astrophysicist: \$54,907 to \$71,377. Attention: 88-141-T.

Applications must arrive at the above address no later than 4 p.m. 10 May 1988.

The Smithsonian Institution is an Equal Opportunity Employer. Applications from female and minority candidates are actively solicited.

POSITIONS OPEN

FRESHMEN LABORATORY COORDINATOR— AQUATIC BIOLOGIST

The University of Mississippi, Department of Biology, invites applications for a tenure-track position at the assistant professor level to begin August 1988. Successful candidates will be expected to organize and coordinate freshman biology laboratories, supervise graduate teaching assistants, and establish an extramurally funded research program in aquatic biology. Ph.D., publications required, teaching experience at the freshman level preferred. A current departmental focus is the development of a strong freshwater biology research program. Submit letter of application, curriculum vitae, transcripts, and three letters of recommendation by 22 April 1988 to: **Dr. William D. Longest, Chairman, Aquatic Biologist Search Committee, Department of Biology, The University of Mississippi, University, MS 38677.**

The University of Mississippi is an Equal Opportunity Employer.

FRESHWATER ECOLOGIST

The Département des sciences biologiques of l'Université de Montréal is seeking applicants for a full-time tenure-track appointment at the assistant or associate professor level.

Functions: Undergraduate teaching of ecology in French, direction of graduate students, development of an independent research program within an established group of freshwater ecologists.

Requirements: Ph.D. or equivalent in biology; specialization in one or more aspects of freshwater ecology; strong publication record. Preference will be given to candidates whose field of research permits integration or complementarity with the existing group.

Salary and benefits: In accordance with the collective agreement.

Send curriculum vitae, a detailed list of publications, copies of principal publications and three letters of recommendation before 15 May 1988 to:

M. Roch Carbonneau
Acting Chairman
Département des sciences biologiques
Université de Montréal
C.P. 6128, succursale A
Montréal (Québec)
Canada
H3C 3J7

In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada.

HUMAN GENETICIST

Immediate opening for a Ph.D. with interest in molecular, biochemical, population, or cytogenetics. Responsibilities include the development of an independent research program and to provide administrative support for the Human Genetic Mutant Cell Repository. Send curriculum vitae, statement of research interests, and the names of three references to: **Dr. Gerard McGarrity, President, The Coriell Institute for Medical Research, Copewood Street, Camden, NJ 08103.** *Affirmative Action/Equal Employment Opportunity.*

IN VITRO FERTILIZATION/ ANDROLOGY TECHNICIAN

Excellent opportunity available for an in vitro fertilization/andrology technician. Qualified candidate must have a demonstrated knowledge base of cell culture and sterile techniques, ability to perform small animal surgery, and possess a bachelor's degree in biology. Master's degree is a plus. Experience in in vitro fertilization is desirable. We offer a competitive salary and benefits package which includes health/dental insurance and tuition reimbursement. Interested candidates should submit their résumé to:

Susan Seals Thomas
Northwestern Memorial Hospital
310 East Huron
Chicago, IL 60611

Equal Employment Opportunity/Affirmative Action Employer.

POSITIONS OPEN

INFRARED ASTRONOMER

The Smithsonian Institution's National Air and Space Museum is currently recruiting for a postdoctoral researcher in infrared astrophysics. Salary range \$27,716 to \$36,032.

Applicants should have at least 3 years of research experience in the field, including work carried out in graduate school, and should have a thorough familiarity with the construction and use of infrared or submillimeter astronomical equipment.

The successful candidate will work in a small group and will be expected to participate in collaborative ventures which may include use of the Smithsonian Astrophysical Observatory's telescopes on a competitive basis. Other projects may involve airborne, balloon-borne or satellite projects as well as interpretive projects making use of IRAS or other archival data. May occasionally assist in the establishment of museum exhibits dealing with recent astrophysical advances.

Interested applicants should mail a completed SF 171 (Application for Federal employment, curriculum vitae, and abstracts of three of their most significant publications to: **Smithsonian Institution, Employment Office, Washington, DC 20560.** Attention: 88-150-T.

Applications must arrive at the above address no later than 4 p.m., 10 May 1988.

The Smithsonian Institution is an Equal Opportunity Employer. Applications for female and minority candidates are actively solicited.

INSECT NEUROCHEMISTRY/MOLECULAR NEUROBIOLOGY—A position as **RESEARCH ASSOCIATE OR ASSISTANT RESEARCH PROFESSOR** (depending on qualifications) is available, funded for at least 2 years and effective 15 June 1988 or as soon as possible thereafter, in the Arizona Research Laboratories Division of Neurobiology (ARLDN), a research unit (8 faculty, 27 trainees and staff) devoted to cellular, developmental, and molecular neurobiology and neuroethology of insects. The appointee will work on identification and function of neuropeptides and neuron-specific proteins in the insect CNS using neurochemical and molecular-biological methods and should have interest and research experience in those areas as well as a Ph.D. degree. Applications will be accepted through 15 April 1988 or until the position is filled. Send letter of inquiry or application, résumé, statement of interests and future plans, and names and addresses of at least three faculty references to: **Professor John G. Hildebrand, Director, ARL Division of Neurobiology, 611 Gould-Simpson Building, University of Arizona, Tucson, AZ 85721.** *The University of Arizona is an Equal Opportunity/Affirmative Action Employer.*

MOLECULAR GENETICIST to conduct studies on the molecular mechanisms involved in neoplastic development. Must have at least 3 years of postdoctoral experience in the identification and expression of mammalian genes. Extensive experience with viral (including retroviral) vectors in cell lines and transgenic mice that express active oncoproteins and other products in inducible and constitutive expression systems is required. Extensive experience in the use of molecular diagnostic techniques such as the polymerase chain reaction to identify genetic abnormality in cancer cells is required. Salary commensurate with qualifications. Submit curriculum vitae to: **The Squibb Institute For Medical Research, Human Resources Department 100, P.O. Box 4000, Princeton, NJ 08543.** *An Equal Opportunity Employer.*

MOLECULAR IMMUNOBIOLOGIST to conduct studies on the molecular mechanisms involved in neoplastic development. Must have at least 3 years of postdoctoral experience in the immunobiology of cancer. Extensive experience with recombinant DNA techniques with special emphasis on the identification, cloning and sequencing of human oncogenes is required. Extensive experience in the development of immunogenicity and tumorigenicity assays for experimental metastasis using both immunocompromised and immunocompetent animals is also required. Salary commensurate with qualifications. Submit curriculum vitae to: **The Squibb Institute For Medical Research, Human Resources Department 200, P.O. Box 4000, Princeton, NJ 08543.** *An Equal Opportunity Employer.*

POSITIONS OPEN

MOLECULAR BIOLOGIST. The Division of Reproductive Endocrinology, Department of OB/GYN, Tufts University School of Medicine is seeking a Ph.D. with a strong background in molecular biology to support a newly established DNA laboratory. Ongoing research interests include the study of human reproductive disorders at the molecular level. The successful candidate is expected to demonstrate familiarity with human DNA probes and to develop grant-supported research projects. Send curriculum vitae to: **Richard Reindollar, M.D., OB/GYN Department, New England Medical Center, Box 36, 750 Washington Street, Boston, MA 02111.**

MOLECULAR BIOLOGIST MOLECULAR BIOLOGY UNIT RUSH MEDICAL COLLEGE RUSH UNIVERSITY

The Rush Cancer Center of Rush University seeks a qualified senior molecular biologist to head and to develop a Molecular Biology Unit within the biology research program of the university. The individual selected will coordinate ongoing programs and will direct future development of the unit. The investigative emphasis of the unit is focused on the study of human oncogenes.

The candidate for this position should have a Ph.D. and/or an M.D. degree and presently hold associate or full professor rank (or equivalent). The individual selected will have an outstanding and nationally recognized record of investigative achievement in the study of human oncogenes and should be appreciated as a leader in this field.

Applicants should submit curriculum vitae and the names of three references. Applications, nominations, or inquiries should be forwarded to: **Dr. Jules Harris, Director, Rush Cancer Center, 1725 West Harrison Street, Chicago, IL 60612. Telephone: 312-942-5904.**

Rush University is an Equal Opportunity/Affirmative Action Employer.

NEUROBIOLOGIST

The School of Osteopathic Medicine (SOM) of the University of Medicine and Dentistry of New Jersey (UMDNJ) is seeking a neurobiologist for a state-funded, tenure-track appointment. Rank and salary are open, and depend upon the qualifications of the applicant. Senior candidates will be expected to lead a major research program in neurobiology. Teaching responsibilities will include neuroscience.

The School of Osteopathic Medicine is in a period of transition and growth. Its basic science faculty is currently housed in central New Jersey, on the campus of Rutgers University and Robert Wood Johnson Medical School. The School is scheduled to move to Stratford, New Jersey, in the Camden-Philadelphia region by July 1990.

Applicants should send curriculum vitae, statement of research interests, and names of three referees to: **Dr. Michael Miller, Department of Anatomy, UMDNJ-SOM, 675 Hoes Lane, Piscataway, New Jersey 08854-5635.** Applications should be submitted by 1 June 1988. *UMDNJ-School of Osteopathic Medicine is an Equal Opportunity/Affirmative Action Employer, M/F/H/V.*

POSTDOCTORAL FELLOW

Rush-Presbyterian-St. Luke's Medical Center, in Chicago, has an excellent opportunity for a highly skilled professional to become part of an innovative oncology research project involving the cloning of interleukin receptor genes and a study of their expression in cancer cells.

The chosen candidate will be a Ph.D. with experience in the area of molecular immunology and laboratory research. Background in biochemistry or molecular biology also acceptable.

We offer a competitive salary, comprehensive benefits package, and opportunity for professional growth. Please send letter of interest and curriculum vitae to:

**Margaret Rybski
Rush-Presbyterian-St. Luke's Medical Center
729 South Paulina Street
Chicago, IL 60612**

Equal Opportunity Employer M/F

BE PART OF OUR EXCITING ADVANCES IN NEURAL SCIENCE RESEARCH!

The Merrell Dow Research Institute, a subsidiary of the Dow Chemical Company, has the following challenging career opportunities.

NEUROCHEMIST-BS/MS JOB CODE BMB

We are looking for a qualified individual to establish a neuronal tissue culture laboratory in our new research facilities. As a part of a dynamic multi-disciplinary research team studying the biochemical sequelae of neurotransmitter receptor activation, the candidate would play a key role in integrating cell culture capability with existing expertise.

This position requires a BS/MS degree in Pharmacology, Biochemistry or a related discipline with 2-3 years of relevant experience in the primary culture of CNS neurons. Experience in receptor/effector coupling and the measurement of second messenger formation would be a significant advantage.

CELLULAR NEUROBIOLOGY- Ph.D. JOB CODE RMP

We are looking for an individual with experience using primary culture systems as models for studying neural development, neuronal trophic factors, or cell-cell signalling. Additional expertise such as electrophysiology, in situ hybridization, or receptor pharmacology would be an advantage. The successful candidate will interact with an established group using state-of-the-art biochemical, pharmacological and computer imaging techniques to study nervous system function.

PROTEIN PHOSPHORYLATION-Ph.D. JOB CODE RLJ

We are seeking an individual with experience studying the role of protein phosphorylation in signal transduction and the mechanisms of protein kinase regulation in the nervous system. The successful candidate will enter an active research program supporting the study of protein kinase regulation and interact with a multidisciplinary group using cellular, biochemical, pharmacological and behavioral models to examine the role of second messenger systems in neural function.

These positions offer the opportunity to join an expanding research institute supporting basic scientific research in areas of biochemistry, pharmacology, and cell biology. We offer excellent compensation, comprehensive benefits and relocation assistance. In responding to our ad, please refer to the specific job code and send your resume, salary expectations and names of three references in confidence to:

Personnel Services Manager

Merrell Dow

**MERRELL DOW
RESEARCH INSTITUTE
2110 East Galbraith Road
Cincinnati, OH 45215**

*U.S. Citizenship or
Permanent Visa Required
Equal Opportunity Employer M/F/H/V*

CANCER RESEARCH IN KANSAS

Academic Research and Training
supported by a grant from

The Wesley Foundation of Wichita, KS.

Training opportunities at both the postdoctoral and predoctoral level in a variety of research areas are available in a newly-funded interinstitutional and interdisciplinary program sponsored by The University of Kansas, Kansas State University, The Kansas University Medical Center—Kansas City, and The Kansas University School of Medicine—Wichita. Efforts are underway to identify up to thirty-five Wesley Scholars to participate in externally funded basic and clinical research programs at these Kansas academic research institutions. Major areas of cancer research supported by this program include a) Molecular Biology and Cell Growth Regulation, b) Anti-Cancer Drugs and Multiple Drug Resistance, and c) Tumor Immunology and Host Resistance. Qualifications for these positions include a strong interest in cancer related research and excellence in previous academic training. Postdoctoral positions require an M.D., Ph.D., or equivalent degree. Stipends for these positions are highly competitive. The Kansas University system is an equal opportunity, affirmative action employer.

For further information in the following areas, please write to:

Molecular Biology and
Cell Growth Regulation

Donald J. Roufa, Ph.D.
Division of Biology
Ackert Hall
Kansas State University
Manhattan, KS 66506

Anti-Cancer Drugs and
Multiple Drug Resistance

Mathias P. Mertes, Ph.D.
Dept of Medicinal Chem.
School of Pharmacy
University of Kansas
Lawrence, KS 66045

Tumor Immunology and
Host Resistance

David C. Morrison, Ph.D.
Dept of Microbiology
KU Medical Center
39th and Rainbow Blvd
Kansas City, KS 66103

Senior Research Scientist

Battelle, Pacific Northwest Laboratories at Richland, Washington, is seeking a PhD organic analytical chemist to conduct research in analytical chemistry of organic compounds and mixtures. Will develop and apply analytical methods and techniques in the energy-related life science, or nuclear waste areas. A PhD in analytical chemistry and experience in a variety of analytical techniques, including gas and liquid chromatography, mass spectrometry and GC/MS are required. Demonstrated research diligence through extensive publication in peer-reviewed journals is required. Additional postdoctoral or industrial, and trace organic analysis experience, is desirable. Successful candidate will have demonstrated ability to manage/lead research studies as a principal investigator. As this is a senior level assignment, excellent multi-disciplinary collaborative, directive, and communication skills are required.

Reply in confidence with detailed resume and salary requirements to: **Loren P. Henderson, Professional Employment, Battelle-Northwest, Department 031, P.O. Box 999, Richland, WA 99352.** An Equal Opportunity Employer M/F. U.S. Citizenship required.



Microbiology Research

Pfizer Central Research is inviting applications from microbiologists to join its antibacterial discovery program. Working with a strong multidisciplinary project team, you will apply your basic research skills to conceptualizing new strategies for the discovery of mechanistically novel antibacterials for animal health applications.

We are seeking an accomplished scientist who is innovative, enthusiastic, has good communication skills, enjoys working as part of a team and has broad interests and capabilities. You must possess a PhD and at least two years of post-doctoral experience in microbiology. While specific experience in bacterial physiology/pathogenesis would be an asset, educational training, intellectual capabilities and leadership traits are most important.

This position offers excellent opportunities for professional recognition and career growth. We offer an excellent salary, benefit and relocation package, plus an attractive southeastern Connecticut shore location. Qualified applicants should submit their resume, a brief description of research accomplishments, and the names, addresses and phone numbers of three professional references to: Mr. Donald R. Nelson, Manager of Employee Relations, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.



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NEW ZEALAND

UGC POSTDOCTORAL RESEARCH FELLOW IN SOIL SCIENCE

A challenging position exists for a **postdoctoral Fellow** to join scientists in the Department of Soil Science and Fertilizer and Lime Research Centre who are studying the behavior of reactive phosphate rocks and their partially acidulated products in soil. The successful applicant will have had research experience in one or more of soil chemistry, geochemistry and mineralogy, and will be required to develop novel techniques using a JEOL JXA-733 Superprobe and a Cambridge 250 Mark III SEM with high resolution EDS to identify the changes occurring in and around phosphate rock granules. Preference will be given to applicants with previous experience of analyses using these instruments. The Fellow will play a key role in initiating and co-ordinating research in this multidisciplinary project. Further details are available from **Professor R E White**.

Applications, including a full Curriculum Vitae and naming two referees, close with **Mrs. V B Bretherton, Academic Appointments Officer, Personnel Section as soon as possible.**

B R H Monks
Registrar

RESEARCH PHYSICIST

GM-10-13 • \$39,501 to \$51,354 per annum

(Salary dependent upon qualifications)

Provides theoretical and numerical analysis in the areas of advanced radiation sources and acceleration of intense relativistic electron beams. In the areas of advanced radiation sources, the applicant should be experienced in various aspects of the free electron laser—especially in the topic of radiation focusing, guiding and steering. The applicant should also have experience in various advanced accelerator schemes such as the inverse free electron laser accelerator and plasma heat wave accelerator, and plasma wake field accelerator.

Knowledge of and experience in high power radiation sources and acceleration of intense charged particle beams, as well as the ability to plan and conduct theoretical research and computational analysis of free electron lasers and various laser driven accelerator scheme is required.

QUALIFICATIONS: A Ph.D. in physics or its equivalent, plus three years experience in plasma physics, high power radiation sources, and acceleration of intense charged particle beams.

Interested applicants should submit a Personal Qualifications Statement (SF-171) or detailed resume by 15 May 1988, to:

NAVAL RESEARCH LABORATORY

Civilian Personnel Division

Attn: 47-018-14: KWS (S)

4555 Overlook Avenue, S.W.

Washington, D.C. 20375-5000

AN EQUAL OPPORTUNITY EMPLOYER • U.S. CITIZENSHIP REQUIRED

SENIOR RESEARCH IMMUNOLOGIST

The Department of Molecular Immunology has an opening for an individual with a Ph.D. or equivalent and a minimum of 2-3 years of postdoctoral experience, who is interested in the transcriptional control of gene expression. This individual will become part of a multi-disciplinary team studying the role of various lymphokines/cytokines in immune and inflammatory diseases. Candidates should be highly motivated and possess excellent verbal and written communication skills. Candidates should possess a strong background in molecular biology and an interest in the study of cell/tissue specific transcription factors.

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

Interested candidates should submit resume and three letters of recommendation to **Theresa Marinelli, R80M-TL1, Merck & Co., Inc., P.O. Box 2000, Rahway, New Jersey 07065.**

Equal Opportunity Employer



Merck & Co., Inc.

BIOCHEMISTRY

RESEARCH BIOCHEMIST & BIOLOGIST

FMC CORPORATION, a leader in agricultural chemical research, has two exciting opportunities available in the BioResearch Department. These positions are located at our Chemical R & D Center in Princeton, NJ

The **Research Biochemist** will conduct the investigation into insecticide mode of action, development of Intrinsic Assays and Research programs to identify potential insecticidal target sites. Will participate in quantitative structure activity and analysis of insecticidal leads. The position requires a PhD in Biochemistry, Pharmacology or Insect Physiology. Experience in neuropharmacology and biochemical physiology characterization of neurotransmitter receptors, insect endocrinology or insect cell culture. Must have a working knowledge of statistics and computers, and a familiarity of molecular design strategies.

The **Research Biologist** will coordinate and supervise the screening and evaluation of new insecticides and develop testing procedures for screening and evaluation. Position requires a PhD in Entomology or an MS Degree plus 5 years of directly related experience plus familiarity with statistical procedures and their application to experimental design.

FMC's Chemical R & D Center is located in a desirable setting with easy access to New York and Philadelphia. We offer a competitive salary and benefits package commensurate with experience. Interested individuals should forward resume with salary history to: **Employment, FMC CORPORATION, Chemical R & D Center, P.O. Box 8, Princeton, NJ 08543.** Equal Opportunity Employer M/F.



POSITIONS OPEN

PHYSIOLOGIST

The Sanders-Brown Center on Aging at the University of Kentucky invites applications for a tenure-track faculty appointment from a physiologist with research expertise in some aspect of acute stroke. This position is part of a major multidisciplinary initiative in stroke research. The successful candidate will be expected to develop his/her own research program and be willing to participate in multidisciplinary research. A letter of interest, a recent curriculum vitae, and names of three references should be submitted to: **David R. Wekstein, Ph.D., Associate Director, Sanders-Brown Center on Aging, University of Kentucky, Lexington, KY 40536.** *The University of Kentucky is an Equal Opportunity Employer.*

PHYSIOLOGY OF AGING—Two tenure-track positions are available at the assistant professor level. Applicants must be strongly motivated toward independent research and committed to teaching undergraduate and graduate level. Preference will be given to individuals with experience in physiology, molecular biology, cell biology, and neuroscience with relevance to human neurologic disease. Send curriculum vitae, a brief statement of research interests and future plans, significant reprints and names/addresses of three references to: **Dr. M. A. Fahim, Chair of Search Committee, Andrus Gerontology Center, University of Southern California, Los Angeles, CA 90089-0191.**

POSTDOCTORAL FELLOW

Postdoctoral fellowship available immediately for an individual to undertake research within a project investigating the structure and regulation of human glutamate dehydrogenase and its involvement in neurodegenerative disorders. Potential candidates require a strong background in the field of protein purification and biochemistry and/or gene cloning. Salary on the scale of \$18,000 to \$20,000 per annum plus benefits commensurate with qualifications. Location: New York City. Applications including curriculum vitae should be sent to: **Dr. Plaitakis, Neurology Department, Box 1137, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574. Telephone: 212-241-7310 or 212-831-1473.** *An Equal Opportunity Employer.*

POSTDOCTORAL FELLOWS

Openings available immediately for postdoctoral fellows and research assistants in aspects of retrovirology: physiology and structure of retroviruses; origin of heterogeneity; inhibitors of replication. Send résumé and names of three references to: **Dr. Donald T. Dubin, Department of Molecular Genetics and Microbiology, UMDNJ-Robert Wood Johnson Medical School, 675 Hoes Lane, Piscataway, NJ 08854-5635.** *M/F/H/V.*

POSTDOCTORAL POSITION available immediately to study the GTP-binding protein that couples the TRH receptor to phospholipase C [*J. Biol. Chem.* 262, 9521 (1987)]. The project will include partial purification and reconstitution of the TRH receptor and its GTP-binding protein in phospholipid vesicles. Candidate should have a Ph.D. in pharmacology, physiology or biochemistry. Experience in protein purification desirable but not required. Send curriculum vitae and names of three references to: **Dr. Thomas E. Cote, Department of Pharmacology, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814-4799.**

POSTDOCTORAL POSITION available immediately to study the molecular biology of the renin-angiotensin system and aspects of kidney physiology. NIH-funding. This research will combine expertise in molecular biology with aspects of cell culture to dissect how angiotensin-converting enzyme production is regulated by individual tissue types. This work has implications for blood pressure regulation, salt and water reabsorption in the kidney, and aspects of developmental biology. Candidates should be recent M.D.'s or Ph.D.'s. Experience in molecular biology desirable. Salary negotiable. Send curriculum vitae and references to: **Dr. Ken Bernstein, Room 713 WMB, Department of Pathology, Emory University, Atlanta, GA 30322.**

Emory University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately in developmental neurobiology to study synapse elimination at the neuromuscular junction. Techniques will include electrophysiology, immunocytochemistry, electron microscopy, and organ culture. Send inquiries to: **Dr. William Betz, Department of Physiology, University of Colorado Medical School, Denver, CO 80262,** or to: **Dr. R. M. A. P. Ridge, Department of Physiology, Bristol University, Bristol BS8 1TD, U.K.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION UNIVERSITY OF CALIFORNIA, IRVINE

A position to study the control of gene expression during morphogenesis in the opportunistic pathogen *Candida albicans*. Studies will involve gene cloning and transformation, together with other molecular biological techniques. Excellent training opportunities in molecular genetics in eukaryotic microbes. Send curriculum vitae and three letters of reference to:

**Paul S. Sypherd
Department of Microbiology and Molecular Genetics
College of Medicine
University of California
Irvine, CA 92717**

An Affirmative Action/Equal Opportunity Employer

POSTDOCTORAL POSITION available immediately for research on the pathogenesis of *Pseudomonas aeruginosa* for patients with cystic fibrosis. Research will involve the isolation, characterization and cloning of genes involved in the synthesis and/or degradation of slime exopolysaccharides. Excellent microbiological, biochemical, and molecular biological background required. Send curriculum vitae and three letters of recommendation to: **Dr. Neal L. Schiller, Division of Biomedical Sciences, University of California, Riverside, CA 92521-0121.** *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available to utilize the techniques of protein engineering to study the kinetics of folding and unfolding processes. The project will involve low molecular weight proteins such as dihydrofolate reductase or fatty acids binding protein and the use of site-directed mutagenesis to change residues which may be critical to folding/unfolding rates. Send curriculum vitae and names of three references to: **Dr. Carl Frieden, Department of Biological Chemistry, Washington University School of Medicine, Box 8094, St. Louis, MO 63110.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS: VISION RESEARCH

Several postdoctoral positions are available for Ph.D. pharmacologists, biochemists, cell biologists, or physiologists to receive advance training and research experience in the following areas:

- Autonomic control of aqueous humor dynamics
- Ocular inflammatory mechanisms
- Epithelial transport physiology
- Cell biology of the corneal endothelium
- Biochemistry of lens membrane proteins
- Biochemical basis of retinal degeneration

The Kentucky Lions Eye Research Institute offers modern, well-equipped laboratory facilities and a highly interactive faculty of basic scientists dedicated to vision research. Salaries are competitive and commensurate with experience. Please send your curriculum vitae and names of three references to: **Christopher A. Paterson, Ph.D., D.Sc., Director of Research, Kentucky Lions Eye Research Institute, University of Louisville School of Medicine, Louisville, KY 40202.** *University of Louisville is an Equal Opportunity Employer. Affirmative Action/Equal Opportunity Employer.*

TWO POSTDOCTORAL POSITIONS are available to study structure/function relationships of the adhesive protein thrombospondin. A combination of protein biochemical and molecular biological approaches will be used in these studies. One of these positions involves localization of thrombospondin in the developing mouse embryo by immunofluorescence and in situ hybridization. Interested individuals should send a résumé to: **Dr. Jack Lawler, Department of Biomedical Research, St. Elizabeth's Hospital of Boston, Tufts University School of Medicine, 736 Cambridge Street, Boston, MA 02135.** *Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITIONS

Staff fellow and/or visiting fellow/associate positions are available at the National Institute on Alcohol Abuse and Alcoholism (NIAAA). Emphasis is on studies of neuropeptide synthesis and action, and G-protein structure and function, in brain and in cell cultures. Experience in protein chemistry or molecular biology, including work with RNA, and/or autoradiography and in situ hybridization, is required. Salary range is from \$21,000 to \$32,500, commensurate with relevant postdoctoral experience. *NIAAA is an Equal Opportunity Employer.*

Send curriculum vitae and two letters of reference to:

**Dr. Paula Hoffman
National Institute on Alcohol Abuse and Alcoholism
NIH, Building 10, Room 3C103
Bethesda, MD 20892
Telephone: 301-443-1073**

POSTDOCTORAL/ RESEARCH ASSOCIATE

Postdoctoral position available immediately to study the use of primary cultures of hepatocytes as a model for alcohol metabolism and toxicity. Experience in enzymology and liver cell isolation and culture desirable. Salary commensurate with experience. Please send curriculum vitae, brief description of research interest, experience, and names of three references to: **Dr. A. I. Cederbaum, Department of Biochemistry, Box 1020, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574.** *An Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE, Ph.D. or M.D. to work on cell and molecular biology of hormone receptors. Special emphasis is on the regulation of the glucocorticoid receptor in tumor cells and culture. Send curriculum vitae and names of three references to: **Gerald Litwack, Fels Research Institute, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, PA 19140.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE IN MOLECULAR BIOLOGY/HYBRIDOMA TECHNOLOGY to investigate molecular and cellular function of the morphogenetically active plant chromoprotein, phytochrome. Up to three positions are available, with preference to individuals having prior experience with recombinant DNA methods, monoclonal antibodies, protein biochemistry, and/or immunochemistry. Starting dates flexible. Send résumé and names, addresses, and telephone numbers of three references to: **Dr. Lee H. Pratt, Botany Department, University of Georgia, Athens, GA 30602.** *Telephone: 404-542-1841.*

POSTDOCTORAL/RESEARCH ASSOCIATE TRAINING IN MOLECULAR BASIS OF CARCINOGENESIS. A position is available immediately at Columbia University, College of Physicians and Surgeons to study the molecular basis of chemical carcinogen enhancement of viral transformation. Studies will employ specific genetically engineered mutants of adenovirus which display unique phenotypes when cells are pretreated with a carcinogen prior to viral infection. This position requires experience in molecular biology, nucleic acid biochemistry and/or tumor virology. Salary commensurate with experience. Send curriculum vitae and three letters of reference to: **Dr. P. B. Fisher, Cancer Center/Institute of Cancer Research, Columbia University, College of Physicians and Surgeons, 630 West 168th Street, New York, NY 10032.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL TRAINEE RESEARCH POSITION (\$23,000 per year) to characterize the process by which amplified DNA is incorporated into and excised from chromosomal loci in drug-resistant cells. The candidate should have a Ph.D. degree in the biological sciences, and 1 year of experience in cell culture, comparative cytogenetics, chromosomal banding techniques, in situ hybridization, and production and screening of cDNA libraries. The candidate will also present and discuss research results at local and national meetings, and prepare data for publication in medical and scientific journals. Applications directed to: **Jack Hiltzheim, Department of Employment Security, 1309 Poplar Avenue, Memphis, TN 38104.** *Equal Opportunity Employer.*

MOLECULAR GENETICS SCIENTIST/ POSTDOCTORATE

Cetus, a leader in the biotechnology industry, is seeking a scientist to conduct research in molecular analysis of human genetic variation. This will include use of polymerase chain reaction (PCR) DNA amplification as applied to forensic science and/or human disease associations.

We require a Ph.D in Molecular Biology, Genetics or Biochemistry, plus up to 6 years' relevant experience.

Please mail C.V. to:

Cetus Corporation
Box HE
1400 53rd Street
Emeryville, CA 94608



We are an equal opportunity/affirmative action employer.

New Business Development Diagnostic Products

Amersham Corporation, a leading supplier of molecular biology, biomedical and medical diagnostic products to the research and medical community, has an immediate need for an ASSISTANT MANAGER due to expansion.

As part of our New Business Development team, you will be responsible for seeking out and developing new business opportunities in the in vivo and in vitro medical diagnostic market. 25% overnight travel is necessary to interview leading investigators throughout the U.S. and to attend professional meetings. The ideal candidate will possess a M.S. or Ph.D. degree in a life science, previous experience in the research and development of diagnostics, and marketing experience in the industry. Familiarity with current diagnostic products and technologies is critical; a strong instrumentation background would be an asset.

We are offering a highly professional work environment, an excellent starting salary, and an attractive benefits package, including dental insurance, savings/profit sharing, and tuition reimbursement. For prompt consideration please submit your resume with your salary requirements in confidence to:

Employment Manager
Amersham Corporation
2636 S. Clearbrook Dr.
Arlington Heights, IL 60005

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\$4.4 billion strong, Abbott Laboratories is known for innovation and leadership in several worldwide scientific markets. Our strong commitment to well-funded, well-managed R&D has helped us gain that reputation and has spurred the growth of our Pharmaceutical Products Division. To help further our research efforts, we need individuals in the following areas:

MACROMOLECULAR CRYSTALLOGRAPHY

The Computer Assisted Molecular Design group is expanding its protein crystallography laboratory to support Discovery Projects within the Pharmaceutical Products Division. This group is dedicated to the discovery of potent new pharmaceutical agents by combining x-ray crystallography and molecular graphics with energy and molecular dynamics calculations. Rational drug design plays a major role in our research strategy and methodology.

Macromolecular crystallographers with a Ph.D. and postdoctoral experience should be strongly self-motivated individuals who have demonstrated the potential for conducting independent and creative research in one or more of the areas related to protein crystallography. Your involvement will include research into one of a number of structural problems in the areas of neurosciences, immunosciences, and cardiovascular, inflammatory, bacterial and viral disease.

Our Protein Crystallography Laboratory is equipped with two Rigaku 12 kw rotating anode x-ray generators, a Rigaku high speed diffractometer, and a Nicolet-Xentronics area detector, as well as state-of-the-art computing and graphics facilities.

In addition to a superior scientific environment and outstanding management recognized as among the best in the nation, we offer a generous salary and full benefits including profit sharing and a stock retirement plan. We are located in an attractive suburban area just 30 miles north of Chicago. For confidential consideration, please send your resume with salary history to: **Patricia Handy/Corporate Placement, Dept. SCI/4-1, Abbott Laboratories, Abbott Park, IL 60064.** Abbott is an Affirmative Action Employer.

THEORETICAL CHEMISTS

The Pharmaceutical Discovery Division is committed to discovery of new pharmaceutical agents through the combination of rational drug development and outstanding science. Rational drug design using computerized graphics and energy calculations plays a major role in our research strategy.

To support our Discovery projects, the Computer Assisted Molecular Design group in Pharmaceutical Discovery is seeking Ph.D. candidates in the areas of:

Energetics of peptides and proteins, structure and function. Successful candidates should have knowledge and experience with molecular mechanics analysis of peptides and proteins, minimization, molecular dynamics and statistical mechanics.

Ph.D. candidates should be strong, self-motivated individuals who have demonstrated potential for conducting research independently and creatively. All scientists will be working closely with our project teams to apply theoretical methods to target peptides, proteins, and receptor-ligand systems. Therefore, good oral and written communication skills are essential.



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POSITIONS OPEN

Department of Neurosurgery seeks applicants for non-tenure-track **RESEARCH ASSISTANT PROFESSOR**. Preferred applicant is a published researcher in the field of morphological correlates of LTP with technical expertise in quantitative hippocampal anatomy, stereology, electron microscopy, and hippocampal neurophysiology. Send application, including curriculum vitae, statement of future research interests, and the names of three references, by 15 April 1988 to: **Dr. W. B. Levy, Department of Neurosurgery, Box 420, University of Virginia School of Medicine, Charlottesville, VA 22908.** An Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSISTANT PROFESSOR, Department of Medicine, Ph.D. in physiology or pharmacology with postdoctoral fellowship in renal physiology and/or experimental hypertension. Knowledge of radioimmunoassay, chromatography, receptor assays desired. Will develop/direct experimental animal laboratory. Send curriculum vitae and three references to: **John Bauer, M.D., Professor of Medicine, University of Missouri-Columbia, Columbia, MO 65212.** An Affirmative Action/Equal Opportunity Employer.

RESEARCH ASSISTANT/ASSOCIATE OR PROFESSOR: Position available at rank of research assistant, associate, or professor in the Transplantation Division of the Department of Surgery at the State University of New York (SUNY) at Stony Brook for M.D./Ph.D. with established record of publications and research activity. Candidate will be involved in a clinical and research program in transplantation and immunology with special interest in immunogenetics, cellular immunology, and microbiology. Salary is commensurate with academic rank. Send résumé to: **Dr. Felix Rapaport, M.D., Department of Surgery/Transplantation Division, SUNY Stony Brook, Stony Brook, NY 11794-8691.** SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer. AK #64-B.

RESEARCH ASSOCIATE

The Center for Laser and Applied Technology, Charlotte Memorial Hospital and Medical Center invites applications for a full-time research associate position. The position will involve research in cardiovascular applications of lasers. Individuals applying should have previous experience in small animal cardiac surgery, cardiac catheterization, cardiopulmonary bypass perfusion of canines, and the use of lasers. A 2- or 4-year degree in a related field is also required.

Interested applicants should submit curriculum vitae and letters of recommendation by 15 April 1988 to:

**George Tatsis
Heineman Medical Research Laboratory
P.O. Box 32861
Charlotte, NC 28232
Equal Opportunity Employer**

RESEARCH ASSOCIATE AND POSTDOCTORAL RESEARCH POSITIONS available 1 July 1988. Background in cell and molecular biology preferred. Research involves: (i) cloning of mRNA for membrane and cytoskeletal proteins of myoblasts involved in differentiation; (ii) regulation of cAMP phosphodiesterase gene expression during myogenesis. Salary commensurate with experience. Applicants should forward curriculum vitae by 31 May 1988 and ask at least two referees to send letters of reference directly to: **Dr. B. D. Sanwal, Department of Biochemistry, University of Western Ontario, London, Canada, N6A 5C1.** In accordance with Canadian Immigration Policy, this advertisement is directed to Canadian citizens and permanent residents of Canada.

RESEARCH INVESTIGATOR is sought to conduct equilibrium and kinetic measurements of the denaturation and renaturation of purified proteins in the laboratory of **Dr. Earle Stellwagen** at the University of Iowa. Candidates should have a Ph.D. degree in biochemistry, biophysics, or chemistry, and have either predoctoral or postdoctoral experience in spectral or chromatographic measurements of proteins in solution. An annual salary of \$22,100 is offered, with an attractive fringe benefits package. If interested, please submit a résumé and the names of at least two references to: **Iowa Job Service, 1810 Lower Muscatine Road, Iowa City, IA 52244.** Include Job Order #1A1727820 in your response.

POSITIONS OPEN

RESEARCH ASSOCIATE

M.D. or Ph.D. with strong background in protein chemistry and molecular genetics. Duties include isolation of isozymes, nuclei, and chromatin, hybridoma production, and monoclonal antibody immunocytochemistry in muscular dystrophy research. Salary at \$21,000 per year. Send résumé and three recommendation letters by 15 May 1988 to: **Jack Hilzheim, Tennessee Job Service, 1309 Poplar, Memphis, TN 38104.**

RESEARCH TECHNOLOGIST—Radiation/oncology: A bachelor's degree in a basic biological discipline and 2 years of relevant laboratory experience in cellular or molecular biology is required. Research will be in the general area of cancer biology and prefers an individual with understanding of modern recombinant DNA technology. **RESEARCH TECHNOLOGIST**—Hematology/oncology: Chronic lymphocytic leukemia project requires an individual with a bachelor's degree in basic science and a minimum of 2 years of laboratory experience. Biological science background essential. Experience with techniques in cellular immunology desired. **RESEARCH COORDINATOR**—Radiation/oncology: Highly experienced technical scientist needed with a B.S. degree in basic science, master's preferred. Minimum of 2 years of related research experience to participate in studies on vascular biology and cancer. Experience in computer sciences and biology needed to participate in the operation of a state-of-the-art digital computerized imaging system. Preference will be given to candidates with an understanding of both computer science and biological technology. Forward résumé indicating position of interest along with salary history/requirements to: **Andrea McGoldrick, Employment Representative, Long Island Jewish Medical Center, 400 Lakeville Road, New Hyde Park, NY 11042.** Equal Opportunity Employer.

SENIOR FELLOW, ANALYTICAL CHEMIST, Ph.D. level or equivalent, experienced in GC/MS and HPLC with interest in neuroscience, to provide supervision and support for clinical pharmacology research group.

Responsibilities include developments and modifications of analytical methods, directing sample and analytical data handling procedures and supervision of research associates. Please send curriculum vitae including salary requirements to: **James M. Perel, Ph.D., Clinical Pharmacology Program, Western Psychiatric Institute and Clinic, University of Pittsburgh, School of Medicine, 3811 O'Hara Street, Pittsburgh, PA 15213.**

Equal Opportunity Employer.

JPL/NASA VISITING SENIOR SCIENTIST ASTROPHYSICS DIVISION ASSISTANT DIRECTOR FOR SCIENCE

The Jet Propulsion Laboratory invites applications to the Visiting Senior Scientist Program in the Astrophysics Division at NASA headquarters. The position of assistant director for science will be open about 1 July 1988 when the present incumbent, Lawrence Peterson, returns to his home institution, The University of California at San Diego. Responsibilities include science policy, science strategy and planning, activities which bridge discipline boundaries, liaison with the scientific community, working with international partners, and contributing to the origin of new science projects, among others. The position is filled by a scientist from outside of NASA and reports directly to the director of the Astrophysics Division, **Charlie Pellerin**. This is a unique opportunity for a well-known scientist to have an interesting and rewarding experience, and at the same time perform an important service to the astronomical community. Appointees must be U.S. citizens or permanent residents, and are expected to return to their home institution following their NASA assignment. Please provide curriculum vitae, bibliography, and the names of four references to:

**Dr. Harry Ashkenas, 180-900
Department U48
Jet Propulsion Laboratory
4800 Oak Grove Drive
Pasadena, CA 91109
Telephone: 818-354-8251**

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POSITIONS OPEN

RESEARCH VIROLOGIST POSITION: (\$39,500 per year) to study the molecular basis for virulence, host range, and transmissibility of influenza viruses using the methodologies such as cloning and sequencing the genes of influenza viruses, genotyping the RNA segments of the viruses and preparing monoclonal antibodies. Experience in molecular biology, cloning expression and site-directed mutagenesis including experience with monoclonal antibodies and molecular pathogenesis. Ph.D. degree, and 2 years of experience required. Résumés directed to: **Jack Hilzheim, Department of Employment Security, 1309 Poplar Avenue, Memphis, TN 38104.** Equal Opportunity Employer.

SENIOR MINERALOGIST to test, identify, analyze, and classify mineral samples and conduct environmental sample analysis for asbestos exposure level using polarized light/electron microscopy; responsible for quality control and quality assurance of laboratory work and conduct research and development of new analytical techniques. Require M.S. in geology/geochemistry, with 2 years of experience or completion of requirements for Ph.D. in geology/geochemistry in lieu of experience. Salary: \$32,000 per year. Apply in person with résumé to: **Georgia Department of Labor, 2811 Lakewood Avenue, S.W., Atlanta, GA 30315, or to the nearest Georgia Job Service Center. Control #GA 5275728.**

TENURE-TRACK POSITION BECKMAN RESEARCH INSTITUTE CITY OF HOPE DIVISION OF BIOLOGY

The Division of Biology seeks candidates for a tenure-track position (any rank). The candidate will be chosen on the basis of the quality and potential of their work rather than their research topic per se. The Division is seeking, however, to build strength in the areas of developmental biology, physical biochemistry, genetics, immunology and protein chemistry. The successful candidate should have a minimum of 2 years of postdoctoral experience and have a clearly demonstrated potential to conduct an independent research program. The position is a full-time research position with no teaching responsibilities.

Candidates should send their curriculum vitae, a statement of research interests and plans as well as three letters of reference to:

**Dr. R. B. Wallace, Chairman
Division of Biology
Beckman Research Institute of the City of Hope
1450 East Duarte Road
Duarte, CA 91010**

The Beckman Research Institute of the City of Hope is an Equal Opportunity/Affirmative Action Employer.

FIELD MUSEUM OF NATURAL HISTORY VICE PRESIDENT FOR COLLECTIONS AND RESEARCH

The Field Museum of Natural History invites applications for the position of Vice President for Collections and Research. The Field Museum is one of the world's largest natural history museums, and houses collections of more than eighteen million specimens and artifacts that are of international scope and significance. The Collection and Research programs support a staff of over eighty persons, including 31 research-curators divided among the Departments of Anthropology, Botany, Geology and Zoology. Administratively these programs also include Scientific Support Services, a major library of more than a quarter of a million volumes, and the scientific journal *Fieldiana*. The Vice President has primary responsibility for managing the research and collection activities of the Field Museum of Natural History, and promoting these programs locally, nationally and internationally. Candidates should have a record of distinguished research achievement in a field of natural science or anthropology; breadth of scientific understanding; familiarity with the administration of major academic research institutions; and demonstrated leadership and administrative ability. Applicants should submit a detailed curriculum vitae, including bibliography, before 31 May 1988. Applications and enquiries should be directed to: **Dr. Peter R. Crane, Chairman—Search Committee, Department of Geology, Field Museum of Natural History, Roosevelt Road at Lake Shore Drive, Chicago, IL 60605.** The Field Museum of Natural History is an Equal Opportunity/Affirmative Action Employer.

BIOTECHNOLOGY R&D MANAGER

Southern Research Institute has an immediate opportunity for a candidate with a proven record of productive, high-quality research activities to direct an expanding industrial microbiology and biotechnology group. Candidate must have a Ph.D. with postdoctoral training in microbiology, molecular biology, or biochemistry and a minimum of ten years' managerial experience in directing industrial biotechnology research operations. Qualified applicant must be thoroughly familiar with various biotechnology markets and skilled at formulating plans to meet the specific needs for advanced biotechnology research. Target markets include such areas as health care products and pharmaceuticals, environmental and bioprocess technology.

Duties include direct supervision of approximately 15 professional and technical staff members, aggressive project development efforts, proposal preparation, project implementation, preparation of reports and publications, and staffing and direction of multidisciplinary research teams.

Located in a 20-acre complex and with a staff of over 700, Southern Research Institute is a diversified contract research organization in its fifth decade of operation. The Birmingham metropolitan area, with a population of approximately one million, offers a mild, seasonal climate; abundant recreational and cultural opportunities; below average living costs and taxes; and a variety of convenient and attractive housing alternatives. To apply, send c.v. to James G. Kerr, Personnel Administrator:



SOUTHERN RESEARCH INSTITUTE
Personnel Office, Dept. B-280
P.O. Box 55305
Birmingham, AL 35255-5305

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Biochemical Process R&D Career Opportunities

Merck Sharp and Dohme Research Labs is expanding its biotechnology development area and is currently seeking talented and highly motivated biochemists and biochemical engineers who are committed to excellence. Openings are available in both the West Point, Pennsylvania and Rahway, New Jersey locations. The selected candidates will be responsible for developing small and large scale production and purification processes for natural and recombinant proteins, characterizing the products and transferring the procedures to manufacturing. Candidates are required to have:

- Ph.D. in Biochemistry, Biochemical Engineering or Chemical Engineering with a strong biochemical background and have significant experience in modern methods for the isolation, purification and characterization of proteins.
- Excellent oral and written communication skills.
- Proven research ability as evidenced by an outstanding publication record.
- Experience in scale-up, automation and pilot scale production of proteins is desirable.

Our salaries, benefits and growth potential are excellent. Interested candidates should submit their resumes with the names of three references and salary requirements to **Ms. J.A. Eiermann, Merck & Co., Inc., P.O. Box 2000, Rahway, New Jersey 07065.**

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GLAXO INSTITUTE FOR MOLECULAR BIOLOGY S.A.

The Geneva biotechnology research unit of a large U.K. pharmaceutical group has a vacancy for a

CELLULAR BIOLOGIST

to conduct its research in the field of

CSF

(colony stimulating factors)

The objectives of this research are to better understand the cellular responses to CSF, to evaluate their therapeutic effects in murine models and to develop laboratory tests for use in clinical trials of human GM-CSF.

Situated in the attractive city of Geneva, the institute has a staff of over one hundred, grouped in small teams of specialists in several domains of modern biology. We are part of the Glaxo group, one of the largest pharmaceutical company in the world, which has an outstanding reputation for the quality of its research and products. Our institute offers an excellent salary and benefit package.

The ideal candidate will have several years of post-doctoral experience and a proven track record in the field of hemopoiesis or immunology.

If you are interested in this position, please send your curriculum vitae with a list of publications and the names of 3 references to: Rita Gloor, Personnel Manager, Glaxo IMB S.A., 46, route des Acacias, 1227 Geneva 24, Switzerland.

POSITIONS OPEN

JPL/NASA VISITING SENIOR SCIENTIST SPACE BIOMEDICAL RESEARCH MUSCULOSKELETAL EMPHASIS

The Jet Propulsion Laboratory invites applications to the Visiting Senior Scientist Program in the area of space biomedical research. The position requires a Ph.D. or equivalent degree along with research experience in the musculoskeletal area, a record of research publications in the refereed literature, and strong communication skills. Although any qualified person may apply, tenured faculty members with experience in NASA's Biomedical Research Program in the area of musculoskeletal physiology are the preferred choice. Responsibilities include aiding in the planning and implementation of the Biomedical Research Program within the Life Sciences Division at NASA headquarters. Duties include extensive contacts with the research community, conducting peer reviews of research proposals, recommending selection of investigations, as well as assisting in the maintenance of a balanced and productive program within budgetary resources. The appointee is expected to work closely with managers at several NASA centers and to advise potential investigators from the university community how their plans relate to the NASA Biomedical Program. Frequent travel and residence near NASA headquarters (in the Washington, D.C. area) will be required. (appointees must be U.S. citizens or permanent residents, and are expected to return to their home institution following their NASA assignment. Please provide curriculum vitae, bibliography, and the names of four references to:

Dr. Harry Ashkenas, 180-900

Department U45

Jet Propulsion Laboratory

4800 Oak Grove Drive

Pasadena, CA 91109

Telephone: 818-354-8251

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GRADUATE TRAINING PROGRAM

M.S. IN HUMAN CYTOGENETICS

The Department of Biology, Hofstra University in conjunction with North Shore University Hospital, is accepting applications for the fall 1988 semester. This is an advanced, laboratory-oriented program designed to prepare students for positions as cytogenetic technologists or for further study in cytogenetics. Applicants should have a bachelor's degree in biology, genetics, or a related discipline. Applicants with bachelor's degrees in other subjects will also be considered on an individual basis. Fellowships are available to full-time students with superior scholastic qualifications. For additional information, please contact: Dr. Dorothy E. Pumo, Program Director, Department of Biology, Hofstra University, Hempstead, NY 11550. Telephone: 516-560-5527. *Affirmative Action/Equal Employment Opportunity.*

GRANTS



The American Health Assistance Foundation is accepting 2-year GRANT applications for Alzheimer's disease research with a maximum of \$100,000 renewable. Deadline: 30 October 1988. For further information, please write to:

American Health Assistance Foundation
c/o Mrs. Charlene S. Lehman
15825 Shady Grove Road, Suite 140
Rockville, MD 20850

ORPHAN DRUG RESEARCH GRANTS

Grants are available from the National Organization for Rare Disorders (NORD) for clinical research on the care and treatment of patients with rare diseases. Grant awards are up to \$20,000 per year for either 1 or 2 years. Two-page letter of intent due by 30 June 1988; final proposal by 31 October 1988. For guidelines contact: Grant Administrator, National Organization for Rare Disorders, P.O. Box 8923, New Fairfield, CT 06812. Telephone: 203-746-6518.

PROGRAM

CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain a doctor of optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: Ph.D.-O.D. Program Director, Admissions Office, The New England College of Optometry, Room 14, 424 Beacon Street, Boston, MA 02115.

TEACHING ASSISTANTSHIPS

TEACHING ASSISTANTSHIPS (including tuition waiver) available for qualified applicants beginning September 1988. Graduate study leading to M.S. or Ph.D. with concentration in biochemistry, botany, ecology, marine biology, microbiology, molecular biology, physiology, or vertebrate biology. For further information write to: Professor G. S. Jones, Graduate Coordinator, Northeastern University, Boston, MA 02115. *Northeastern University is an Equal Opportunity Affirmative Action/Title IX Employer.*

TRAINING PROGRAM

A TRAINING PROGRAM IN NUTRITIONAL BIOCHEMISTRY PEW CENTER FOR MOLECULAR NUTRITION PRE- AND POSTDOCTORAL FELLOWSHIPS

A training program in nutrition and metabolism has been established at Case Western Reserve University, as part of a joint effort between the Departments of Nutrition, Biochemistry, Molecular Biology and Microbiology and the Pew Center for Molecular Nutrition. The program will provide postdoctoral fellows with training in the use of molecular biology in metabolic and nutritional studies stressing the use of modern techniques for transferring genes into cells and animals to alter the patterning of metabolic processes. The Pew Center for Molecular Nutrition provides expertise in the use of retroviral vectors and transgenic animals as models for metabolic studies. Formal course work, together with journal clubs and seminars, are available to provide the trainees with a detailed understanding of both metabolism and molecular biology. A program of graduate education in nutritional biochemistry, leading to a Ph.D., M.D./Ph.D. or M.S. degree, is available through the participating departments. Send inquiries or curriculum vitae and the names of three references to: Dr. Richard W. Hanson, Department of Biochemistry, Case Western Reserve University School of Medicine, Cleveland, OH 44106. *An Affirmative Action/Equal Opportunity Employer.*

WORKSHOPS

MEMBRANE TRAFFIC AND RECYCLING IN EUKARYOTES WORKSHOP: The Saddlebrook, Wesley Chapel, Florida, 6 to 8 May 1988.

The goal of this conference is to bring together plant and animal cell biologists to discuss current developments and future research directions in eukaryotic membrane traffic and economy.

Session topics: Golgi compartments, sorting signals/mechanisms along the secretory/endocytic paths, prelysosomal endocytic compartments, lysosomes/vacuoles, dynamics of membrane traffic.

Co-sponsors: NSF (Cell Biology Program), USDA, Keith Porter Endowment.

For information, contact: Dr. David Domozych, Membrane Traffic Symposium, Department of Biology, Skidmore College, Saratoga Springs, NY 12866. Telephone: 518-584-5000 extension 2624.

MODELING METHODS IN BIOLOGICAL RESOURCE MANAGEMENT

An NSF Undergraduate Faculty Enhancement Program for college teachers of mathematics, biology, and biological resource management. At University of Montana, 18 July to 12 August 1988. Focus on modeling analysis in conservation biology, with lectures, computer modeling workshop, and field trips. Participants will receive weekly stipend, plus cost-of-living allowance. (Funding pending) Please apply to: Modeling Workshop, Wildlife Biology/Forestry, University of Montana, Missoula, MT 59812. Telephone: 406-243-5272.

FELLOWSHIPS

ELECTROPHYSIOLOGY POSTDOCTORAL FELLOWSHIP

Postdoctoral fellowships \$25,000 per year, available immediately for cellular and whole animal evaluation of arrhythmia mechanisms. Send curriculum vitae, description of research interest, and the names of three references to: Marjorie Allen, Cedars-Sinai Medical Center, Employee Relations Department, 8700 Beverly Boulevard, Brown Building, 1st Floor, Los Angeles, CA 90048.

FELLOWSHIPS IN EUKARYOTIC MOLECULAR BIOLOGY AND IMMUNOLOGY

Predocutorial and postdoctoral fellowships are immediately available at the University of Southern California (USC) Comprehensive Cancer Center. Training faculty are: R. Deans; G. Dennert; P. Jones; J. Landolph; A. Lee; M. McMillan; R. Maxson; A. Mazumder; P. Vogt.

Send curriculum vitae together with the names of three references to: Dr. Peter A. Jones, Director for Basic Research, USC Comprehensive Cancer Center, 1441 Eastlake Avenue, Los Angeles, CA 90033. *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL FELLOWSHIPS

Two postdoctoral positions available on 1 June 1988. One position will be in laboratory studying epithelial cell polarity and membrane sorting—research will involve analysis of targeting in epithelial cells transfected with genes encoding ion pump proteins—experience in molecular biology is desirable. Second position will be in laboratory studying single-ion channels in epithelial cell membranes of the kidney using patch-clamp methods—experience in membrane physiology desirable. Positions are funded by departmental NIH training grant. Applicants must be U.S. citizen or permanent resident. *Minority individuals are encouraged to apply.* Send curriculum vitae with names of references to:

Emile L. Boulpaep, M.D.
Chairman, Department of Cellular and
Molecular Physiology
Yale University School of Medicine
P.O. Box 3333
New Haven, CT 06510

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POSTDOCTORAL RESEARCH TRAINING FELLOWSHIPS

Fellowships available to residents of North America with Ph.D., M.D., or comparable degree and less than 1 year of postdoctoral laboratory experience by application date for beginning training in basic biomedical research. The 3-year award consists of a stipend of \$20,000 for the first year, with increments of \$1,000 for each of the next 2 years; \$1,000 per annum research allowance; travel to fellowship location; annual meeting. Application deadline 15 August 1988; fellowships activate following July. For application forms, write or telephone: The Helen Hay Whitney Foundation, 450 East 63rd Street, New York, NY 10021. Telephone: 212-751-8228.

MARKETPLACE

COLLECTED PERSPECTIVES IN CANCER RESEARCH: 1986-1987

Cancer Research announces the latest compilation of articles from its acclaimed "Perspectives" series. Oncogenes, retroviruses, growth factors, natural killer cells and breast cancer treatment are among topics examined by leading cancer authorities. Order copies from Subscription Fulfillment Dept., Waverly Press, Inc., P.O. Box 64473, Baltimore, MD, 21264-0473. Price (payable in US currency), \$9/copy (\$11 outside US).

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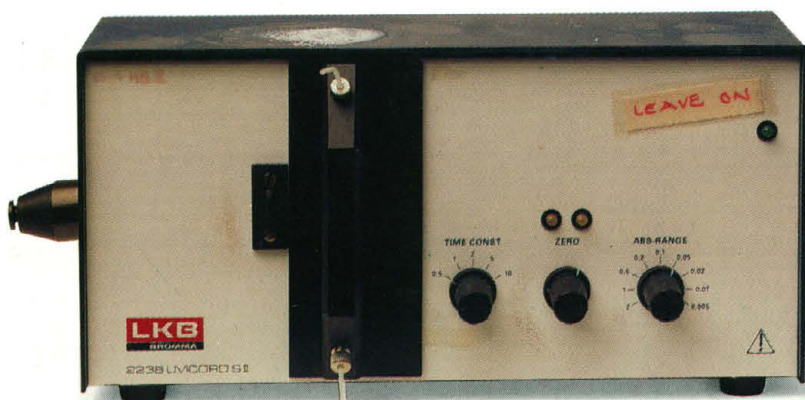
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To begin with, the robust Uvicord monitor is often the first to be called on for coldroom duty. And because most people know that the Uvicord lamp is so long-lived, it often gets left on day and night.

Likewise, because recent models are so accommodating, you might find the same Uvicord monitor connected to a standard or pilot-scale chromatography system one day and reconnected to an HPLC station the next. In fact, with a wide range of interchangeable flow cells and filters, there's hardly a life science application that a Uvicord hasn't been a part of.

Still, there are more Uvicord UV monitors operating in labs throughout the world than any other UV monitor. That's another thing the Uvicord has managed to put up with—a lot of tough competition.

Imagine what abuse Pharmacia LKB would have to take if all these Uvicord monitors suddenly gave up? Our business depends upon your ability to take them for granted. That's why we're committed to continuously developing their tolerance.



The Uvicord® SII monitor (left) for Standard Chromatography and the new Uvicord® SD monitor (right) featuring complete Pharmacia LKB HPLC system communication, inert titanium analytical and preparative HPLC flow cells, and enhanced sensitivity.

*Should you wish to obtain a new instruction manual, just call or write to your local Pharmacia LKB representative, specifying the model and serial no. of your monitor.

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