

nisms and activity-dependent processes in development (for example, in the formation of ocular dominance columns).

The final section ("On neuronal assemblies and memories") mixes some network theories with experimental observations on collections of neurons, both invertebrate and vertebrate.

The quality of the contributions is a little uneven, and some of the sections are no longer quite up-to-date in the faster-moving areas of study. Nevertheless, this book is useful because it provides a focused summary of some recent research directions in learning and memory.

CHARLES F. STEVENS

Department of Molecular Neurobiology,
Yale University School of Medicine,
New Haven, CT 06510

Books Received

Chemical Weapon Free Zones? Ralf Trapp, Ed. Oxford University Press, New York, 1987. xii, 211 pp. Paper, \$32. Stockholm International Peace Research Institute Chemical and Biological Warfare Studies, no. 7.

The Chemistry of Acid Rain. Sources and Atmospheric Processes. Russell W. Johnson *et al.*, Eds. American Chemical Society, Washington, DC, 1987. xii, 337 pp., illus. \$59.95. ACS Symposium Series, vol. 349. Based on a symposium, New York, April 1986.

Chemistry of High-Temperature Superconductors. David L. Nelson, M. Stanley Whittingham, and Thomas F. George, Eds. American Chemical Society, Washington, DC, 1987. xii, 329 pp., illus. \$64.95. ACS Symposium Series, vol. 351. Based on a symposium, New Orleans, LA, Aug.-Sept. 1987.

Color and the Computer. H. John Durrett, Ed. Academic Press, Orlando, FL, 1987. xii, 299 pp., illus., + plates. \$59.50.

Community Ecology. Pattern and Process. Jiro Kikkawa and Derek J. Anderson, Eds. Blackwell Scientific, Palo Alto, CA, 1986. xii, 432 pp., illus. \$50; paper, \$35.

Comparative Behavior of African Monkeys. Evan L. Zucker, Ed. Liss, New York, 1987. xii, 239 pp., illus. \$49.50. Monographs in Primatology, vol. 10.

Dr. Luis Ugueto. Ingeniero, Astronomo y Professor. Alberto E. Olivares. Academia de Ciencias Físicas, Matemáticas y Naturales, Caracas, 1986. 309 pp., illus. Paper, \$10.

Electroanalytical Measurements in Flowing Liquids. K. Štulík and V. Pačáková. Horwood, Chichester, U.K., and Wiley, New York, 1987. 290 pp., illus. \$77.95. Ellis Horwood Series in Analytical Chemistry.

The Electronic Structure and Chemistry of Solids. P. A. Cox. Oxford University Press, New York, 1987. xii, 259 pp., illus. \$55; paper, \$24.95.

Elements of Statistics for the Life and Social Sciences. Braxton M. Alfred. Springer-Verlag, New York, 1987. xiv, 190 pp., illus. \$36. Springer Texts in Statistics.

The Encyclopedia of Aging. George L. Maddox, Ed. Springer, New York, 1987. xxviii, 893 pp., illus. \$96.

Encyclopedia of Indian Natural History. Centenary Publication of the Bombay Natural History Society, 1883-1983. R. E. Hawkins, Ed. Published on behalf of the Bombay Natural History Society by Oxford University Press, New York, 1987. xvi, 620 pp., illus., + plates. \$49.95.

Encyclopedia of Neuroscience. George Adelman, Ed. Birkhäuser Boston, Cambridge, MA, 1987. Two volumes. lxvi, 1308 pp., illus., + appendix and index. \$125.

Highlights on Endocrinology. Claus Christiansen and Bente Juel Riis, Eds. First European Congress of Endocrinology, Copenhagen, 1987. 436 pp., illus. DKR 750. From a congress, Copenhagen, June 1987.

(Continued on page 1553)

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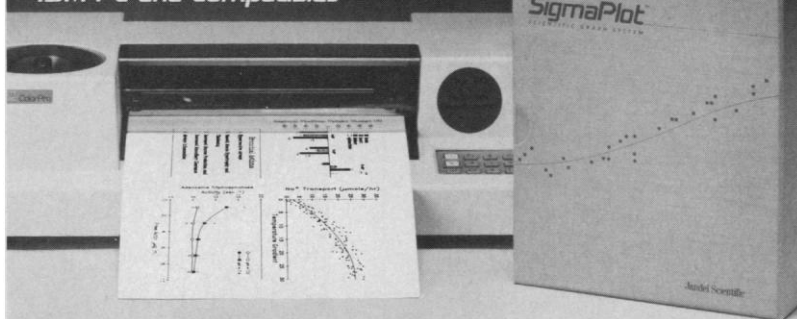
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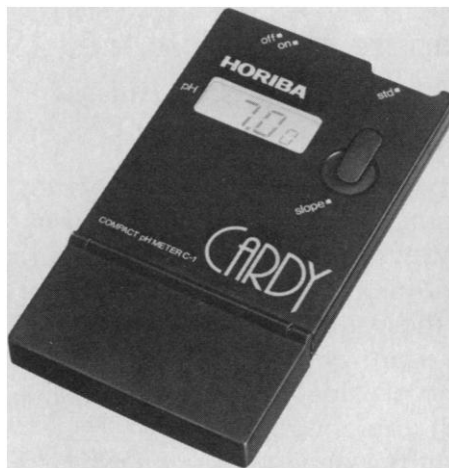
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Literature

Centrifugal Partition Chromatograph is a brochure that describes a system for separations without a solid support by means of liquid-liquid partition countercurrent distribution. Sanki Laboratories. Circle 543.

Spectral Search Libraries describes databases for the IBM PC family of computers that contain Fourier transform infrared data for thousands of compounds. Sadtler Research Laboratories. Circle 544.

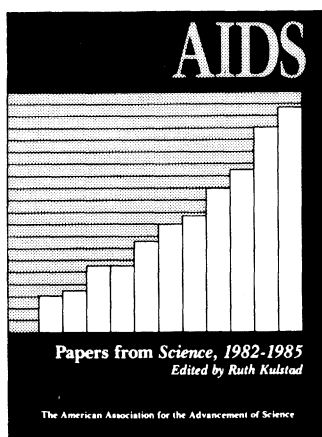
Spectrophotometer Cells is a catalog of 100 types of cells for spectrophotometry, fluorimetry, liquid chromatography, electrophoresis, and laser absorption. NSG Precision Cells. Circle 545.

Microtomy and Optical and Electron Microscopy is a 70-page catalog of 1000 instruments, reagents, and services for microtomy and microscopy, including diamond knives, vacuum evaporators, critical point dryers, and silicon etchers. EMC Corp. Circle 547.

Advanced Workstation Computers, Networking and Software for the Laboratory is a catalog of software and hardware for nuclear magnetic resonance and infrared spectroscopy applications. New Methods Research. Circle 548.

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Intermediary Metabolism. Otto Hoffmann-Ostenhof, Ed. Van Nostrand Reinhold, New York, 1987. xviii, 492 pp., illus. \$79.95.

The International Atomic Energy Agency and World Nuclear Order. Lawrence Scheinman. Resources for the Future, Washington, DC, 1987. xviii, 320 pp. Paper, \$16.95.

International Handbook of Psychology. Albert R. Gilgen and Carol K. Gilgen, Eds. Greenwood, Westport, CT, 1987. xviii, 629 pp. \$75.

Introduction to Common Lisp. Taiichi Yuasa and Masami Hagiya. Academic Press, Orlando, FL, 1987. x, 293 pp. \$29.95. Translated from the Japanese edition (Tokyo, 1986) by Richard Weyhrauch and Yasuko Kitajima.

Introduction to Dynamics of Continuous Media. Julian L. Davis. Macmillan, New York, 1987. x, 390 pp., illus. \$34.95.

Introduction to the Physics and Techniques of Remote Sensing. Charles Elachi. Wiley-Interscience, New York, 1987. xviii, 413 pp., illus. \$44.95. Wiley Series in Remote Sensing.

Introduction to Thermomechanics of Magnetic Fluids. V. G. Bashtovoy, B. M. Berkovsky, and A. N. Vislovich. English-edition editor, R. E. Rosensweig. Hemisphere (Harper and Row), New York, 1987. xii, 216 pp., illus. \$84.50. Translated from the Russian edition.

Linear Models for Unbalanced Data. Shayle R. Searle. Wiley, New York, 1987. xxiv, 536 pp., illus. \$49.95. Wiley Series in Probability and Mathematical Statistics.

The Lost Notebooks of Loren Eiseley. Kenneth Heuer, Ed. Little, Brown, Boston, 1987. xiv, 260 pp., illus., + plates. \$24.95.

Marine Resource Mapping. An Introductory Manual. M. J. A. Butler *et al.* Food and Agriculture Organization of the United Nations, Rome, 1986 (U.S. distributor, Bernan/Unipub, Lanham, MD). xxii, 256 pp., illus., + charts in pocket. Paper, \$16.75. FAO Fisheries Technical Paper 274.

Physics of Be Stars. Arne Slettebak and Theodore P. Snow, Eds. Cambridge University Press, New York, 1987. xviii, 557 pp., illus. \$79.50. From a colloquium, Boulder, CO, Aug. 1986.

Physics of the Stoics. S. Sambursky. Princeton University Press, Princeton, NJ, 1987. xii, 153 pp. Paper, \$8.95. Reprint, 1959 edition.

Physiological Responses of Marine Organisms to Environmental Stresses. Janet V. Dorigan and Florence L. Harrison. U.S. Department of Energy, Ecological Research Division, Washington, DC, 1987. x, 501 pp., illus. Paper, \$15.

Politics Versus the Law. The Reinterpretation of the ABM Treaty. Raymond L. Garthoff. Brookings Institution, Washington, DC, 1987. x, 117 pp. Paper, \$8.95.

Polymers. An Encyclopedic Sourcebook of Engineering Properties. Wiley-Interscience, New York, 1987. xxvi, 665 pp., illus. \$64.95. Encyclopedia Reprint Series.

Polymers for High Technology. Electronics and Photonics. Murrae J. Bowden and S. Richard Turner, Eds. American Chemical Society, Washington, DC, 1987. x, 628 pp., illus. \$109.95. ACS Symposium Series, vol. 346. Based on a symposium, Anaheim, CA, Sept. 1986.

Principles of Rock Fragmentation. George B. Clark. Wiley-Interscience, New York, 1987. xii, 610 pp., illus. \$65.

The Production of New Potato Varieties. Technological Advances. G. J. Jellis and D. E. Richardons, Eds. Cambridge University Press, New York, 1987. xx, 358 pp., illus. \$49.50. Based on a meeting, Cambridge, England, Dec. 1985.

Proteases in Biological Control and Biotechnology. Dennis D. Cunningham and George L. Long, Eds. Liss, New York, 1987. xx, 326 pp., illus. \$100. UCLA Symposia on Molecular and Cellular Biology, vol. 57. Based on a symposium, Park City, UT, Feb. 1986.

Tigers of the World. The Biology, Biopolitics, Management, and Conservation of an Endangered Species. Ronald L. Tilson and Ulysses S. Seal, Eds. Noyes, Park Ridge, NJ, 1987. xxx, 510 pp., illus. \$64. Noyes Series in Animal Behavior, Ecology, Conservation and Management. From a symposium, Minneapolis, MN, April 1986.

Time Travel and Other Mathematical Bewilderments. Martin Gardner. Freeman, New York, 1987. xiv, 295 pp., illus. \$17.95; paper, \$12.95.

Triassic-Jurassic Rift-Basin Sedimentology. History and Methods. John C. Lorenz. Van Nostrand Reinhold, New York, 1987. xviii, 315 pp., illus. \$42.95.

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ASSISTANT PROFESSORS OF PHARMACEUTICS STATE UNIVERSITY OF NEW YORK AT BUFFALO

Applications are invited for tenure-track positions available 1 September 1988 for recently trained Ph.D.'s in drug metabolism, drug delivery, pharmacodynamics, theoretical pharmacokinetics, or drug analysis. Postdoctoral or previous experience essential. Applicants should submit, by 30 June 1988, curriculum vitae, names of three references, and a summary of research interests to: **Ho-Leung Fung, Ph.D., Department of Pharmaceutics, School of Pharmacy, Cooke Hall, State University of New York, Buffalo, NY 14260.** *SUNY at Buffalo is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF CELLULAR AND MOLECULAR PHYSIOLOGY

Applications are solicited for a position at the rank of assistant professor in the tenure-track at the Department of Cellular and Molecular Physiology, Yale University School of Medicine, effective 1 July 1988. Candidates must hold a M.D. or a Ph.D. degree with experience and interest in membrane transport processes, more in particular the cellular and molecular biology of membrane proteins. Opportunities are available for both collaborative and independent research and for graduate and medical student teaching.

Qualified women and minority group members are encouraged to apply. Complete curriculum vitae including publications and the names and addresses of three references should be sent prior to 15 April 1988 to:

**Emile L. Boulpaep, M.D.
Chairman, Department of Cellular
and Molecular Physiology
333 Cedar Street
P.O. Box 3333
New Haven, CT 06510**

Yale University is an Affirmative Action/Equal Opportunity Employer.

University of California, San Diego, School of Medicine is seeking outstanding candidates to fill tenured-track positions at the **ASSISTANT TO FULL PROFESSOR** levels. Demonstrated creativity and productivity in the field of molecular biology as applied to Neurosciences are an essential criteria for appointment. The positions require teaching at the graduate and medical school undergraduate levels. Opportunities exist for collaborative research with the broad, interdisciplinary Neuroscience Group at UCSD and associated institutions. Salary will depend on qualifications of the applicants. All applications received by 31 May 1988 will receive thorough consideration. Send curriculum vitae, bibliography, and names and addresses of five references to: **Dr. Robert Katzman, Department of Neurosciences, M-024, University of California, San Diego, La Jolla, CA 92093.** *The University of California is an Equal Opportunity/Affirmative Action Employer.*

ASSOCIATE DEAN COOPERATIVE EXTENSION COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES AND DIVISION OF AGRICULTURE AND NATURAL RESOURCES UNIVERSITY OF CALIFORNIA, DAVIS

The University of California seeks an academic leader to serve as associate dean, Cooperative Extension, College of Agricultural and Environmental Sciences and the Division of Agriculture and Natural Resources. This is a new position, 75% full-time employment, in the Office of the Dean, and a 25% full-time employment appointment as a cooperative extensionist in affiliation with one of the departments of the College and Division. The position is available on or before 1 July 1988 and is an 11-month appointment for a period of 5 years, with the possibility of reappointment. Primary responsibilities are: coordination of Cooperative Extension programs between the Davis Campus, counties and selected regions of the state; providing leadership, administrative support and coordination between department chairs, county directors, and state-wide program Associate Deans of Cooperative Extension at the Berkeley and Riverside Campuses in the development and maintenance of Cooperative Extension programs. A Ph.D. degree in a related field of agricultural or environmental science is required. Demonstrated administrative leadership is desirable. Submit curriculum vitae, a statement of administrative interests, and names and addresses of three references to: **Dean Charles E. Hess, Office of the Dean, College of Agricultural and Environmental Sciences, University of California, Davis, CA 95616.** Applications must be received by 1 May 1988. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

RESEARCH ASSOCIATES MOLECULAR BIOLOGY

Amgen, an industry leader in advanced biotechnology, develops products for a wide variety of applications. Recent progress has created opportunities for Research Associates in our Specialty Chemicals and Enzymes Group.

Qualified applicants should have a BS or MS in Molecular Biology, Biochemistry or a related discipline and 2-4 years of experience in Prokaryotic Molecular Biology or Molecular Genetics. Experience with basic molecular biological techniques such as library construction, vector construction, immunoblot analysis and enzyme assays is essential. Familiarity with Gram positive organisms is highly desirable.

Amgen offers a stimulating and challenging research environment as well as an attractive location one hour northwest of Los Angeles. **Amgen** also offers an excellent compensation and benefits package. Qualified applicants should send a resume and a list of 3 references, in confidence, to:

**Recruitment, Dept. #23
AMGEN
1900 Oak Terrace Lane
Thousand Oaks
CA 91320**



Equal Opportunity Employer

UNIVERSITY OF CALIFORNIA

Office of the President

DIRECTOR—NATURAL RESERVE SYSTEM AGRICULTURE AND NATURAL RESOURCES

The University of California's Natural Reserve System (NRS), was established in 1965 to protect for educational research purposes a series of undisturbed natural areas representing the state's vast ecological diversity. Since then, the NRS has grown to include 27 reserves specially designated and managed for use as "outdoor classrooms and laboratories" by students, teachers, and researchers from any institution of higher education.

The Director reports to the Vice President-Agriculture and Natural Resources, and administers and coordinates the development of the NRS in consultation with the Universitywide NRS Faculty Advisory Committee. Responsibilities include: supervising the systemwide NRS staff; formulating and implementing systemwide strategic, programmatic, and operational plans; developing budget requests; facilitating and coordinating research and teaching programs on NRS reserves; cultivating private donations; and interacting with natural resource oriented agencies and organizations managing natural areas or otherwise sharing NRS objectives.

REQUIREMENTS:

A doctorate in a discipline associated with the biological or physical sciences, with a strong interdisciplinary perspective on research and teaching, and successful experience in the management and leadership of a large academic program, (or equivalent education and experience). Ability to motivate and supervise staff. Excellent oral, written, problem-solving, and decision-making skills. Strong interpersonal and conflict resolution skills. Knowledge of and commitment to the principles of equal opportunity and affirmative action in personnel and in program delivery.

SALARY RANGE:

Starting salary commensurate with experience and qualifications ranging between \$57,200 and \$71,500. Excellent benefits including relocation package.

APPLICATIONS:

Please send resume, salary history, and letter of application, by April 15, 1988 to:

University of California
Office of the President—Search Committee 2
2199 Addison Street,
Room 192 University Hall
Berkeley, California 94720



The growing \$4.4 billion success of Abbott Laboratories is due in part not only to aggressive R&D but also to the exceptional management for which we've won considerable recognition. These strengths extend to our Pharmaceutical Products Division, where we now seek the following scientists to join our research teams.

Ph.D. PROTEIN BIOCHEMIST

Within our Molecular and Cell Biology Department, you'll be involved in the cloning and expression of proteins related to disease states in a wide variety of disciplines. Successful candidate will have a Ph.D. with 2-5 years of post-doctoral experience in the purification of proteins in the nanomolar and subnanomolar range. Experience in the purification of proteins from recombinant sources would be helpful, but not required.

Ph.D. BIOCHEMIST

Within our Immunoscience Division, you'll conduct research aimed toward discovering novel pharmaceuticals for the treatment of inflammatory and allergic diseases. This involves working with staff to develop new methods and in vitro assays in the area of lipid mediator research. Ph.D. in biochemistry with 0-3 years post doctoral experience required, along with a real interest in pharmaceutical development. Some experience in lipid biochemistry or receptor pharmacology is a plus.

We offer a stimulating professional and scientific environment, as well as excellent salaries and full benefits including profit sharing and stock retirement plans. We are headquartered in an attractive suburban area just 30 miles north of Chicago. For confidential consideration, please send your resume with salary history to: **Pat Handy, Corporate Placement, Dept. SCI/3-25, Abbott Laboratories, Abbott Park, IL 60064.** Abbott is an affirmative action employer.



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POSITIONS OPEN

ASSISTANT RESEARCH PHYSICIST UNIVERSITY OF CALIFORNIA, IRVINE

The Department of Physics, University of California, Irvine, anticipates an opening for an experienced experimental research physicist (Ph.D. level) to work on a liquid argon detector development program and a heavy water Cerenkov detector project. Emphasis is given to the development and construction of state-of-the-art low noise analog and digital electronics, and the computer-based analysis of radioactive contamination and backgrounds for Cerenkov detectors. Candidates must have a broad background in analog and digital electronics, and must have extensive experience in high vacuum and cryogenic techniques applicable to liquid time projection chambers. Computing experience and solid knowledge in particle and nuclear physics is required. Please send résumé, bibliography, and the names of three professional referees to: **Dr. Peter Doe, Department of Physics, University of California, Irvine, CA 92717. An Affirmative Action/Equal Opportunity Employer.**

TEXAS—ASSOCIATE DEAN FOR RESEARCH AND DIRECTOR DENTAL SCIENCE INSTITUTE

Dental degree and Ph.D. or equivalent desirable. Experience in dentally related sponsored research and research administration highly desirable. Salary and position commensurate with background and experience. *The University of Texas is an Equal Opportunity Employer. Women and minorities are encouraged to apply.* Send curriculum vitae to: **Dr. R. K. McDaniel, Chairman, Search Committee for Associate Dean for Research and Director of DSI, University of Texas Health Science Center Dental Branch, P.O. Box 20068, Houston, TX 77225.**

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.

BIOLOGIST/ENVIRONMENTAL SCIENTIST, assistant/associate professor, tenure-track, fall 1988; Ph.D. required. To teach introductory courses in environmental studies, biology, and plant ecology. Broad training in plant physiology, natural history, or microbiology is desired. Send curriculum vitae, transcripts, and three letters of recommendation to: **Mrs. Susan Mann, Administrative Assistant, A-26, Johnson State College, Johnson, VT 05656.**

POSITIONS OPEN

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.**

STANFORD UNIVERSITY

The Department of Biological Sciences is searching for a **BEHAVIORAL ECOLOGIST** at the level of assistant professor. We seek an ecologist whose interests focus on behavior. The successful candidate must have an outstanding record of research. Teaching responsibilities will include an undergraduate course in behavioral ecology. *Stanford University is an Equal Opportunity Employer. Women and minority candidates are especially invited to apply.* Send curriculum vitae and the names of three references to: **Behavioral Ecology Search Committee, Department of Biological Sciences, Stanford University, Stanford, CA 94305-5020.**

BIOLOGIST/ASSISTANT PROFESSOR

An entry-level, tenure-track position to begin August 1988. Ph.D. in biology is required. Teaching responsibilities will include parasitology and the coordination of laboratories for a non-majors general biology course. The development of an active research program and direction of graduate students is expected. Research area is open, but preference will be given to applicants with expertise in ecological or molecular parasitology. The successful applicant will have the opportunity to interact with the MSU Hancock Biological Station and the Commonwealth Center for Ecosystem Studies. Application review will begin 1 April 1988. Submit transcript(s), three letters of recommendation, and curriculum vitae to: **Dr. Robert E. Daniel, Department of Biological Sciences, Murray State University, Murray, KY 42071. MSU is an Equal Opportunity/Affirmative Action Employer.**

BIOLOGY FACULTY POSITION METROPOLITAN STATE COLLEGE

Probationary full-time faculty position. Earned Doctorate with an emphasis in human anatomy, and strong supporting course work in human physiology, or the other-way-around, required. Interest in a teaching career required; college teaching experience desired. Teaching duties will be human anatomy and human biology for general studies students, possibly human physiology, introductory biology for science majors and course(s) in area of specialty. Professional activity and college and community service required. Interested applicants must submit the following to the address given by 1 May 1988: Letter of application, curriculum vitae, copies of transcripts, three letters of reference, and a brief statement of how the person sees his/her role in undergraduate science education

**Dr. George Becker, Chair
Department of Biology, Box 53
Metropolitan State College
1006 11th Street,
Denver, CO 80204**

Metropolitan State College is an Equal Opportunity Employer, applications from minorities and women are particularly invited. Metropolitan State College does not discriminate on the basis of race, color, creed, national origin, sex, age, or handicap in admissions or access to, or treatment or employment in, its educational programs or activities. Inquiries concerning Title VI and Title IX may be referred to: **Dr. Percy Morehouse, Jr., Director of Equal Opportunity/Assistant to the President, 1006 11th Street, Box 63, Denver, CO 80204. Telephone: 303-556-2999.** Inquiries concerning Section 504 may be referred to: **AHEC, P.O. Box 4615-P, Denver, CO 80204. Telephone: 303-556-8387.** Or, inquiries may be referred to: **The Office for Civil Rights, U.S. Department of Education, 1961 Stout Street, Denver, CO 80294.**

POSITIONS OPEN

BIOCHEMIST

POSTDOCTORAL POSITION available to study mechanisms of modification of radiation-induced DNA damage. Mechanisms to be studied include reaction of thiols with DNA radicals, metal ion catalysis of radical reactions and charge delocalization by chromatin semiconductivity. Emphasis will be on DNA lesions resulting from multiple radical attack. Principal model system will be isolated mammalian cell nuclei. Experience with characterization of DNA lesions or with enzymology of DNA repair would be desirable. Project is part of a multidisciplinary program aimed at improving cancer therapy by modification of tumor and normal tissue biochemistry. Send curriculum vitae and names of three references to: **Dr. Edward Bump, Dana-Farber Cancer Institute, 44 Binney Street, Room JF 222, Boston, MA 02115. An Affirmative Action/Equal Opportunity 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**

UNIVERSITY OF MINNESOTA DEPARTMENT OF LABORATORY MEDICINE AND PATHOLOGY CLINICAL VIROLOGY

ASSISTANT PROFESSOR (temporary), M.D., completed residency in clinical pathology or internal medicine with 2 years of clinical infectious diseases training beyond residency. Two years of experience in either diagnostic or research virology laboratory with experience in culturing retroviruses. Demonstration of research productivity necessary including publications in peer-reviewed journals.

Didactic teaching of clinical virology to technicians, medical and medical technician students, residents and postdoctoral fellows. Explore interactions of potential antiviral drugs with HIV at cellular level and conduct in vitro sensitivity testing and synergy studies of combination compounds. Care of HIV-infected patients and conduct clinical trials program. Assistance in daily operation of laboratory and 1 month per year attending on internal medicine infectious disease service.

Send curriculum vitae, three letters of recommendation, and synopsis of recent research activities by 30 April 1988 to:

**Clinical Virology Search Committee
Box 198 UMHC, 420 Delaware Street SE
Minneapolis, MN 55455**

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

CYTOGENETICIST with expertise in human/other mammalian cytogenetics to join cell culture characterization program. R&D responsibilities. Stable support, salary negotiable, faculty position option at Medical School, Wayne State University. Respond to: **W. Peterson, Cell Culture Laboratory, Department of Pediatrics, Children's Hospital of Michigan, Detroit, MI 48201. Telephone: 313-745-5570.**

LILLY RESEARCH LABORATORIES POSTDOCTORAL SCIENTIST PROGRAM

Eli Lilly and Company

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

Biochemical Pharmacology/Hepatic Lipid Metabolism

The postdoctoral scientist will study changes in hepatic lipid metabolism induced by drugs and other chemicals. The research will examine the roles of mitochondrial and peroxisomal fatty acid oxidation in the development and regression of fatty changes in the liver, and the relevance of alterations in lipid metabolism to the induction of peroxisomal fatty acid oxidation. Candidates should have training in pharmacology, biochemistry, or related discipline. Experience in lipid metabolism is preferred but not required.

Muscle Metabolism Research

Scientist with training in muscle growth, muscle physiology, and molecular biology will perform basic research on the regulation and control of skeletal muscle protein synthesis and degradation. The research will examine the effect of beta-adrenergic agonists on muscle protein metabolism. A strong background in biochemistry and molecular biology is desired.

Glycoprotein Structural Research

The postdoctoral scientist will use nuclear magnetic resonance spectroscopy and other physical or chemical methods to pursue structural questions relating to protein carbohydrates. The scientist will collaborate with researchers involved in the structure elucidation of a wide variety of natural products of pharmaceutical interest, as well as with scientists seeking to evaluate the role of glycosylation in protein function. Experience in applying modern NMR techniques in studies of glycoprotein carbohydrates is desirable.

Recombinant Protein Research

The postdoctoral scientist will study the enzymatic cleavage of proteins produced by recombinant DNA technology with the goal of obtaining desired protein products. The scientist must have a strong background in enzyme kinetics and protein chemistry and will have the opportunity to gain experience in enzyme immobilization, protein sequencing, and molecular biology.

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

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

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



John W. Crooks
Manager, College Relations (PSP)³
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285

Equal Opportunity Employer

POSITIONS OPEN

DEAN OF BIOLOGICAL SCIENCES: State University of New York at Stony Brook: Three research-oriented departments (Biochemistry, Ecology and Evolution, and Neurobiology and Behavior) and five interdisciplinary graduate programs in the Life Sciences are continuing their search for an imaginative new leader. Opportunities exist for strengthening ties with basic and clinical programs in a large on-campus Health Sciences Center. The ideal candidates would have a distinguished research reputation and would possess administrative skills and experience. Please send curriculum vitae, and the names of three references to: **Chair, Biological Sciences Dean Search Committee, Room 130, Life Sciences Building, SUNY Stony Brook, Stony Brook, NY 11794** by 20 April 1988. *SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer. AK #66.*

DEVELOPMENTAL BIOLOGISTS

Two tenure-eligible assistant professor positions, beginning August 1988, with preferred specialties in reproductive biology, and the biology of aging. Ph.D. required. Candidates should have molecular/cellular orientations and postdoctoral experience. The successful candidates will be expected to develop productive research programs and to seek external funding. They will participate in the teaching program at the graduate (M.S.), undergraduate, and introductory non-major levels on a rotational basis. The Department of Biological Sciences is housed in a modern well-designed building and successful candidates will be provided generous laboratory space and good animal quarters.

These positions afford an unusual opportunity for professional growth through possible participation in an emerging basic and biomedical research consortium with strong regional commitment and support.

Application deadline is 15 April 1988 and the 15th of months thereafter until the positions are filled (subject to budgetary approval). Please submit curriculum vitae, transcripts, statement of research plans, and names of three references to:

Dr. George H. Sweet
Department of Biological Sciences
The Wichita State University
Wichita, KS 67208

The Wichita State University is an Equal Opportunity/Affirmative Action Employer.

DIRECTOR, OFFICE OF RADIATION SAFETY

Washington State University invites applications/nominations for the full-time, non-tenured track faculty position of Director, Office of Radiation Safety. Salary \$35,000 to \$45,000 per year. Position is available 1 July 1988. Deadline for applications/nominations is 15 April 1988.

Candidates must hold a master's degree in the area of health physics, nuclear sciences, radiation safety or related area, have experience in handling of and knowledge of regulations relating to radioactive materials, and have communication skills. Ph.D. degree preferred and experience in administration and in dealing with users and state compliance officers desirable. Complete position description available upon request.

Send applications/nominations (including curriculum vitae and names of three references) to: **Dr. Mack I. Johnson, Associate Vice Provost for Research, Washington State University, Pullman, WA 99164-1030. Telephone: 509-335-3535.**

Washington State University is an Affirmative Action/Equal Opportunity Educator and Employer. Protected group members are encouraged to apply and to identify their status.

DIRECTOR OF STATEWIDE CYTOGENETICS PROGRAM. Board-certified or -eligible cytogeneticist with experience and interest in molecular biology to direct established cytogenetics laboratory and initiate planning for a regional DNA lab. Primarily service obligations, but research strongly encouraged. The Cytogenetics and Molecular Cell Biology Laboratory is a Division in the Department of Medical Genetics/Montana Medical Genetics Program. Faculty appointment at Montana State University possible. Salary commensurate with training, experience and certification status. *An Affirmative Action/Equal Opportunity Employer.* Contact: **John M. Opitz, Shodair Hospital, Box 5539, Helena, MT 59604. Telephone 406-442-1980.**

POSITIONS OPEN

DIRECTOR CENTER FOR ENVIRONMENTAL RESEARCH AND EDUCATION

This is a new position resulting from an expansion of the existing Great Lakes Laboratory. Included in the new unit are four separate divisions: toxicological and chemical analysis, fisheries and aquatic ecology, water resources planning, and environmental education. The director will work with faculty and staff from departments in the natural and social sciences. Also involved will be the supervision of the field station on Lake Erie, research vessels and the various laboratories controlled by the Center.

The director should have expertise in administration, public relations, research and grant writing, and have academic qualifications in one or more of the areas in which the Center operates. The Center, funded by grants and state appropriations, works closely with other public and private agencies such as the U.S. Corps of Engineers, USEPA, Great Lakes United, and other environmental groups.

Initial appointment will be for 3 years with opportunity for renewal. Appointment as research professor in an appropriate academic department is possible. In addition to a significant fringe benefit package, projected salary is negotiable in the \$50,000 range. Anticipated appointment date is 1 July 1988.

Deadline for receipt of letter of interest, curriculum vitae, and names and addresses of three references is 2 May 1988. **Dr. Joyce Swartney, Chair of the Search Committee, Buffalo State College, 1300 Elmwood Avenue, Buffalo, NY 14222. Buffalo State College is an Equal Opportunity Employer.**

ELECTRON MICROSCOPIST HOWARD HUGHES MEDICAL INSTITUTE AT MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Senior Associate to head major electron microscope effort (new JEOL Model JEM-1200EX) directed at understanding animal development and behavior, focusing on the nematode *Caenorhabditis elegans*. Exciting opportunity to use electron microscopy in collaboration with other laboratory members employing the latest techniques in genetics and molecular biology to analyze cell-cell communication, cell migration, determination, morphogenesis, programmed cell death, nerve process outgrowth, and synapse formation. Ph.D. in ultrastructural studies and extensive experience with the preparation of serial section electron micrographs preferred. Salary based upon experience, potentially commensurate with faculty salaries.

Send statement of interests, résumé, and names of at least three references to: **Professor H. Robert Horwitz, Howard Hughes Medical Institute at Massachusetts Institute of Technology, Department of Biology, Room 56-629, 77 Massachusetts Avenue, Cambridge, MA 02139.**

HHMI and MIT are Equal Opportunity/Affirmative Action Employers.

EXTENSION VEGETABLE SPECIALIST

Academic career-track, 11-month position (75% extension, 25% research) as extension specialist and plant physiologist in the Department of Botany and Plant Sciences at assistant, associate, or full title level, available on or after 1 July 1988. Extension of information and application of research to solve problems in vegetable cropping systems of Southern California, and specific commodities statewide. Research will emphasize the development of improved management methods and the application of plant physiology and ecological principles to the constraints inherent in the California environment. Requires a Ph.D. degree, with emphasis in vegetable crops, plant physiology or closely related discipline. Communication skills and leadership abilities are essential. Send letter of application, curriculum vitae, three letters of reference, and transcripts (recent graduates) to: **Dr. Irwin P. Ting, Chair, Department of Botany and Plant Sciences, University of California, Riverside, CA 92521.** The position will remain open until filled with preference given candidates applying before 15 May 1988. *The University of California, Riverside, is an Affirmative Action/Equal Opportunity Employer. Minorities and women are encouraged to apply.*

POSITIONS OPEN

ECOLOGIST

The Department of Biological Sciences of the University of Pittsburgh is seeking an established scientist with a strong reputation in any branch of ecology. The successful candidate will help to develop the graduate program in ecology and evolution, and will serve as Director of the Pymatuning Laboratory of Ecology, a well-equipped field station located 100 miles north of Pittsburgh. Experience in generating external funding is important, and some administrative background would be desirable. The appointment will be made at the level of tenured associate or full professor, and will be available as early as September, 1988. One or two junior appointments will be made available in the next 2 years as a part of this program expansion.

Applications should include curriculum vitae, copies of recent publications, a statement of research interests and future plans, and the names and addresses of at least three potential references. Address applications to: **Ecology Search Committee, Department of Biological Sciences, University of Pittsburgh, Pittsburgh, PA 15260. An Equal Opportunity/Affirmative Action Employer.**

UNIVERSITY OF GUELPH DEPARTMENT OF HORTICULTURAL SCIENCE TENURE-TRACK FACULTY POSITION IN PLANT TISSUE CULTURE

The Department of Horticultural Science, University of Guelph, invites applications for a tenure-track faculty position at the assistant professor level in its Plant Tissue Culture Program. Applicants with training in plant genetics, plant biochemistry/molecular biology, plant physiology, or plant pathology who have experience in working with tissue culture systems and a working knowledge of cell transformation, regeneration and micropropagation techniques will be given serious consideration. The successful applicant will be expected to establish a strong, independent research program involving one or more horticultural species, to supervise graduate students, to participate in the Departmental undergraduate and graduate teaching programs and to interact with the horticultural industry. Salary will be commensurate with qualifications and experience. Applications including curriculum vitae, a statement of research interests, and the names of three referees should be sent to: **Dr. J. E. Thompson, Chairman, Department of Horticultural Science, University of Guelph, Guelph, Ontario, Canada, N1G 2W1.** The closing date for receipt of applications is 31 May 1988, or when the position is filled.

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

Subject to final budgetary approval. *The University of Guelph is committed to Employment Equity.*

UNIVERSITY OF GUELPH DEPARTMENT OF HORTICULTURAL SCIENCE TENURE-TRACK FACULTY POSITION IN PLANT BIOTECHNOLOGY

The Department of Horticultural Science, University of Guelph, invites applications for a tenure-track faculty position at the assistant professor level in Plant Biotechnology. Preference will be given to candidates with training in plant biochemistry and experience in recombinant DNA technology including the isolation and characterization of plant genes, the synthesis and isolation of cDNA and plant cell transformation. The successful applicant will be expected to establish a strong, independent research program involving one or more horticultural species, to supervise graduate students, to participate in the Departmental undergraduate and graduate teaching programs and to interact with the horticultural industry. Salary will be commensurate with qualifications and experience. Applications including curriculum vitae, a statement of research interests and the names of three referees should be sent to: **Dr. J. E. Thompson, Chairman, Department of Horticultural Science, University of Guelph, Guelph, Ontario, Canada, N1G 2W1.** The closing date for receipt of applications is 31 May 1988 or when the position is filled.

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

Subject to final budgetary approval. *The University of Guelph is committed to Employment Equity.*

MAIZE MOLECULAR BIOLOGY

We are seeking an innovative and strongly motivated scientist to join on-going research on maize plant transformation and regeneration. Qualified applicants should possess the following:

- Ph.D. in Cell or Molecular Biology, Genetics or related field
- Research background in Plant Molecular Biology; experience in Plant Cell Biology and Tissue Culture advantageous but not required.
- A record of scientific achievement including original publications
- A deep interest in exploring cellular and molecular parameters affecting gene transfer and expression in maize
- Willingness to interact with interdisciplinary team involved in maize transformation

Calgene is a leading plant biotechnology company located in Davis, California. We offer an excellent compensation package as well as a progressive research environment and growth potential.

For consideration, send resume and cover letter to: Calgene, Inc., File P500, 1920 Fifth Street, Davis, CA 95616. EOE



CALGENE



Australian Research Council

QUEEN ELIZABETH II FELLOWSHIPS

The Australian Government has established the Queen Elizabeth II Fellowships to encourage research by young scientists of exceptional promise and proven capacity for original work. Under this Scheme, 15 awards will be made annually. Fellowships may be taken up in industry, universities, colleges of advanced education or government research organisations in Australia and are normally for three years. Tenure of a Fellowship is expected to commence within nine months of the announcement of the award. The awards are for high quality research work in one of the three categories described below:

1. FUNDAMENTAL RESEARCH
2. INDUSTRY BASED RESEARCH
3. RESEARCH IN PRIORITY AREAS OF NATIONAL INTEREST

Priority areas of National Interest may include:

- Energy Technology
- Information Technology and Communications
- Materials Technology
- Manufacturing Technology
- Raw Materials Processing
- Scientific and medical instrumentation
- Projects jointly sponsored with industry
- Biotechnology
- Trade, particularly with Asia
- Productivity
- Business Organisation, Management and Industrial Relations
- Occupational Health and Safety
- Marine Sciences and Technology
- Environmental Sciences including Ecology and Natural Resources
- Aboriginal Affairs
- Citizenship and National Identity
- Income, Wealth and Social Inequality
- Social and Economic issues concerning:
 - addiction
 - aging
 - training and employment

QUALIFICATIONS: Fellowships will be awarded to persons holding a Ph.D or equivalent qualifications, or equivalent research or professional experience. The decisions regarding equivalent qualifications will be made on a case by case basis. Recommendations for the award of Fellowships will be made to the Minister for Employment, Education and Training by The Australian Research Council. Awards will, in general, be restricted to applicants who are not more than 30 years of age when applications close, but consideration will be given to older people with less than five years post doctoral experience who have had an interrupted or late start to their academic career.

ELIGIBILITY: Fellowships will be awarded on merit to suitably qualified persons.

SALARY: \$29,632 (Australian) per annum - increased to \$32,127 per annum at age 28 years.

TRAVEL EXPENSES: Necessary travel expenses are payable.

RESEARCH SUPPORT GRANTS: An additional supporting grant of up to \$3,000 per annum to help cover research costs is available.

APPLICATIONS: Persons interested in applying for the above fellowships should obtain application forms and a statement of the conditions of award from: Director, Research Grants Section, Research Policy and Grants Branch, Department of Employment, Education and Training, P.O. Box 826, Woden, A.C.T. 2606, Australia.

The next round of awards will be announced in October 1988. Applications received after the closing date 8th April 1988 will not be considered.

DRUG METABOLISM

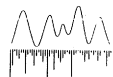
Biomeasure, Incorporated, a company dedicated to the development of therapeutic peptides, is offering an excellent opportunity for a Biochemist with the following credentials:

- PhD with 3 to 5 years postdoctoral or industrial experience in drug metabolism.
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- A working knowledge in instrumental methods of analysis, computer modeling, radioisotopes handling techniques and radioassays.
- An interest in drug delivery systems.
- An outstanding record of scientific accomplishments.
- Familiarity with regulatory issues (GLP).
- Excellent communication and interpersonal skills.

Located near Boston, Biomeasure provides state-of-the-art facilities and a supportive environment for the conduct of research. Excellent compensation, benefits and relocation package available for qualified applicants.

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Biomeasure



Human Resources

Biomeasure, Inc.

11-15 "E" Avenue

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equal opportunity
employer m/f*

Cell Biology Research

The Upjohn Company, a world leader in the research and development of pharmaceuticals, has an Associate position opening in cell biology research. The position requires a BS or MS degree in Biochemistry, Cell Biology or related discipline and involves studies of glycoprotein transport and processing, with emphasis on the structure and function of the oligosaccharide chain. Successful candidates should have knowledge and experience in protein isolation and characterization, including state-of-the-art liquid chromatography methods. Experience in tissue culture and/or glycoprotein analysis is desirable.

The Upjohn Company is located in Kalamazoo, a mid-sized community in southwestern Michigan, midway between Chicago and Detroit. The region is surrounded by rolling hills, lakes and woodlands and provides immediate access to a wide variety of cultural and recreational pursuits, ranging from concerts and theater to a full range of summer and winter sports. Upjohn offers an excellent package of salary and benefits in a community with a reasonable cost of living. For confidential consideration, please call from outside of Michigan toll free 1/800/253-8600, ext. 3-6767, (inside Michigan call collect 616/323-6767) to request an employment application be sent to you immediately. Please refer to position number 22110-2A when calling. We are an Equal Opportunity Employer M/F.

**Our Commitment To Scientific
Excellence Continues...**

Upjohn

POSITIONS OPEN

FACULTY MEMBER— MOLECULAR PATHOGENESIS

The Division of Infectious Diseases of the Department of Medicine at University Hospitals and Case Western Reserve University is seeking a faculty member trained in molecular pathogenesis. This person would join a team focusing on host-parasite interactions in mycobacterial infections (*M. tuberculosis*, *M. avium*). The traditional emphasis of this group has been regulation of the cellular immune response and mononuclear phagocyte effector mechanisms. The new faculty member would participate in studies to define mycobacterial constituents associated with virulence and intracellular parasitism and those engendering a protective immune response. *CWRU is an Affirmative Action/Equal Opportunity Employer.* Send curriculum vitae to: Dr. J. J. Ellner, Department of Medicine, University Hospitals, 2074 Abington Road, Cleveland, OH 44106.

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.*

FACULTY POSITION IN EYE RESEARCH

The Department of Ophthalmology of Duke University Medical Center is seeking an individual for a research faculty position. Applicants should have had postdoctoral training and a demonstrable ability to establish a strong and creative program in eye research preferably, but not necessarily, in an area related to cell biology. Applicants are especially sought who can apply modern methods of cellular and molecular biology to basic problems in ocular pathobiology. The appointee will be expected to interact with the clinical and research faculty and to participate in teaching. A joint appointment with a basic science department at Duke University will be required. Rank and salary will be commensurate with the qualifications of the successful candidate. Interested applicants should send curriculum vitae, a statement of research plans and objectives, as well as three letters of reference to: Dr. Gordon K. Klintworth, Duke Eye Center, Duke University Medical Center, Durham, NC 27710. *Duke University is an Equal Opportunity/Affirmative Action Employer.*

GENERAL PHYSIOLOGISTS. Two Ph.D. tenure-track assistant professorships available 15 August 1988. Undergraduate and graduate teaching in normal and abnormal human and systems physiology, advising, and limited research expectations. Salary competitive. Send statement of interests and goals, résumé, transcripts, and three letters of reference by 11 April 1988 to: Physiology Search Committee, Biological Sciences Department, Salisbury State College, Salisbury, MD 21801. *Salisbury State College is an Affirmative Action/Equal Opportunity Employer. Qualified women, minorities and the disabled are encouraged to apply.*

GENETICS/BIOMETRICS. VISITING ASSISTANT PROFESSOR from August 1988 to May 1989 to teach undergraduate genetics with labs, and applied statistics. Ph.D. required. Send curriculum vitae and three letters of evaluation to: Genetics Search Committee, Biology Department, College of William and Mary, Williamsburg, VA 23185. Reviews begin 15 April 1988 until position filled. *An Equal Opportunity/Affirmative Action Employer. Women and minorities encouraged to apply.*

POSITIONS OPEN

FACULTY POSITION IN EYE RESEARCH

The Department of Ophthalmology of Duke University Medical Center is seeking an established vision researcher with peer-reviewed funding from the National Eye Institute to join its research faculty. Applicants should have a creative ongoing research program preferably, but not necessarily, in an area related to cell biology. The appointee will be expected to interact with the faculty and to participate in teaching. Rank and salary will be commensurate with the qualifications of the successful candidate. Interested applicants should send curriculum vitae, a statement of research plans and objectives, as well as three letters of reference to: Dr. Gordon K. Klintworth, Duke Eye Center, Duke University Medical Center, Durham, NC 27710. *Duke University is an Equal Opportunity/Affirmative Action Employer.*

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.*

ICHTHYOLOGY SCIENTIFIC ASSISTANT

The Department of Ichthyology of the American Museum of Natural History is seeking an assistant to participate in its research programs and activities. Responsibilities will include assisting in data collection, identification of specimens, preparation of research materials, and the preparation and management of the Department's collection of preserved fishes and skeletons as well as the maintenance of departmental facilities.

Qualified candidates must have a baccalaureate degree in the biological sciences, some background in ichthyology, experience in handling scientific collections and equipment, manual dexterity, and be detail-oriented.

Salary \$19,534 per annum plus excellent benefits. For consideration, please submit curriculum vitae to: Mr. Lee Vilensky, Personnel Department (S), American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024. *An Equal Opportunity Employer.*

INVERTEBRATE VIROLOGY

Postdoctoral position available to study the molecular genetics of baculoviruses. Research involves regulation of late gene expression and the construction of genetically engineered viral pesticides. Position available immediately for candidates with a Ph.D. in entomology, microbiology, biochemistry, or related field. Experience in recombinant DNA techniques required. Previous experience in insect or virus research not necessary. Send curriculum vitae and names of three references to:

Dr. H. Alan Wood
Boyce Thompson Institute
Cornell University
Tower Road, Ithaca, NY 14853

Boyce Thompson Institute is an Affirmative Action, Equal Opportunity Employer.

NEUROBIOLOGIST

Two postdoctoral positions are available immediately in a multidisciplinary laboratory for individuals interested in pursuing studies on the functions of astrocytes. One position involves examination of astrocytic responsiveness using a video-based imaging system to monitor changes in intracellular ions via fluorescent probes. The second position involves isolation of pharmacologically distinct subpopulations of astrocytes, and examination of factors released from astrocytes following receptor stimulation. Individuals interested should have a strong background in biochemistry and pharmacology. Send curriculum vitae to: Dr. Ken D. McCarthy, Department of Pharmacology, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-7365. *Equal Opportunity Employer.*

POSITIONS OPEN

UNIVERSITY OF QUEENSLAND *Equal Opportunity in Employment is University Policy* LECTURER/SENIOR LECTURER (TENURABLE) DEPARTMENT OF ANATOMY

Applicants should have a higher degree and/or professional qualifications, and significant postdoctoral research experience in an area of comparative anatomy or biology.

The Appointee will make a substantial contribution to the teaching of comparative anatomy to veterinary science students.

Salary: Senior Lecturer \$37,903 to \$44,091 per annum; Lecturer, \$28,380 to \$37,122 per annum. Closing date: 30 April 1988. Reference No: 10088.

Additional information and application forms are available from: The Director, Personnel Services, University of Queensland, St. Lucia 4067, Queensland, Australia.

MEMBRANE SKELETON

POSTDOCTORAL POSITION available to study the structure and function of a novel, recently identified tropomyosin-binding protein from the erythrocyte membrane skeleton [V. M. Fowler, *J. Biol. Chem.* 262, 12792-12800 (1987)]. Possible projects include (i) molecular cloning and sequencing the gene for this protein and the development of a cellular expression system, (ii) characterization and immunolocalization of analog(s) to this protein in non-erythroid cells and tissues, including brain, lens and skeletal muscle, (iii) analysis of the role of this protein in assembly of the spectrin-actin membrane skeleton and tropomyosin regulation of actomyosin ATPase activity. Salary: \$18,000 to \$22,000, depending on experience. Candidates who have recently completed their Ph.D. thesis, or who expect to do so soon, are particularly encouraged to apply. Send curriculum vitae and names of three references to: Velia M. Fowler, Ph.D., Department of Molecular Biology, MB14, Research Institute of Scripps Clinic, 10666 North Torrey Pines Road, La Jolla, CA 92037.

MICROBIOLOGY/BASIC SCIENCES—Marquette University School of Dentistry has a full-time, tenure-track faculty position available at the **ASSISTANT PROFESSOR** level 1 September 1988. Applicants must have a Ph.D. Postdoctoral research and teaching experience is desirable, but not required. Candidates are expected to participate in the department teaching of dental and allied health students as well as to establish a strong research program. Opportunities are available to interact with the faculty in the other basic sciences. Salary commensurate with education and experience. Review of applications will begin immediately and continue until position is filled. Applicants should send their curriculum vitae, transcripts, names and addresses of four references and a statement of their research interests to:

Dr. Howard M. Klitgaard, Chairman
Department of Basic Sciences
Marquette University School of Dentistry
604 North 16 Street
Milwaukee, WI 53233

Marquette University is an Equal Opportunity/Affirmative Action Employer.

MOLECULAR BIOLOGIST

The Department of Pathobiology, College of Veterinary Medicine, Auburn University invites applications for a tenure-track faculty position. Applicants should have strong training and significant research experience in the molecular or genetic aspects of infectious disease. A Ph.D. degree and postdoctoral research experience are required; demonstrated ability to obtain extramural research funding and research experience in veterinary microbiology are desirable. The successful candidate will be expected to develop a strong independent research program, contribute to collaborative research projects, and participate in graduate training programs. Salary and rank commensurate with training and experience. Application deadline is 31 May 1988, or until the position is filled; position available 1 July 1988. Applicants should submit curriculum vitae, summary of current research activities, and names of three references to: Dr. Lauren G. Wolfe, Department of Pathobiology, Auburn University, AL 36849. *Auburn University is an Equal Employment Opportunity Employer. Minorities and women are encouraged to apply.*

A Career With Results.

Syva is a subsidiary of Syntex and a leader in the medical diagnostics field. We develop, manufacture and market tests to diagnose infectious diseases and detect drug levels. Currently, we have openings in our Research and Development groups for talented, creative scientists.

Research

We're looking for a Senior Scientist to conduct new research projects in our Molecular Biology group; working in DNA hybridizations assays for infectious diseases. A PhD in molecular biology/related field is required with at least 2 years' experience in protein isolation, yeast cloning and recombinant DNA technique.

Development

We're looking for talented scientists experienced in assay development to work in a challenging team environment. Positions are available at the BS/MS/PhD levels, which require strong analytical biochemistry skills, and experience in protein modification and purification, as well as immuno-diagnostics.

Syva offers an attractive benefits program that includes an incentive bonus plan and generous relocation assistance. For



prompt consideration, please send your resume, indicating position of interest, to: Syva, Professional Staffing, Dept. DP/S, P.O. Box 10058, Palo Alto, CA 94303. An equal opportunity employer.

SCIENTIFIC DEVELOPMENT

Our client is a Montreal based Canadian affiliate of a major multinational organization in the pharmaceutical industry.

We are seeking qualified candidates to fill two positions in the Scientific Development Group. Individuals selected for these positions will endeavour to obtain collaboration of leading specialists interested in research projects relevant to the company and also communicate scientific information to and from clinical groups within hospitals and universities. Candidates must be prepared to travel as necessary. Proficiency in both English and French will be considered an asset.

The ideal candidate will:

- possess a Ph.D./Pharm.D./M.D.
- have minimum five years post-doctorate experience and have developed a professional reputation in their field.
- possess excellent oral and written communication skills.
- demonstrate an interest in or exposure to **cardiovascular disease** or **immunology**. Highly qualified individuals in other areas will also be considered.
- possess good interpersonal skills.

A competitive compensation and benefits package will be offered to the right candidates. Interviews will be held in North America and Europe.

PLEASE ADDRESS ALL ENQUIRIES QUOTING REFERENCE #87036 TO:



Dr. Marc C. Raheja
CanMed Consultants Inc.
659 Mississauga Crescent
Canada L5H 1Z9
Telephone (416) 274-0707

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PROFESSIONALS IN THE HEALTH CARE SECTOR

*B*ecton Dickinson Immunocytometry Systems develops and markets, on a worldwide basis, sophisticated flow cytometry instruments and reagent systems used for cell analysis.

Manager, Applications Support Group

For this highly visible position we require the expertise of a seasoned professional with extensive practice to manage applications laboratories for our company in **Braintree, Massachusetts** and **Mountain View, California**.

The professional selected will possess a solid working knowledge of advanced biomedical instrumentation and computer technology combined with extensive knowledge in clinical immunology and flow cytometry.

These qualities are essential as you will manage an accomplished Applications group responsible for the development of applications procedures utilizing software, instruments and reagents which are manufactured and/or serviced by our company.

Specific responsibilities will include initiating annual budgets; analyzing and selecting equipment; and formalizing and implementing group objectives, policies and procedures. Additionally you will facilitate the training of our Customer Support Groups as well as assist the Customer Education Department in conducting workshops, symposiums and seminars.

Your credentials should exhibit a PhD in biophysics, biochemistry, immunology or a related discipline, 8 years of post doctoral training in an academic institution or biotechnology industry combined with 4 years in a medical/diagnostic environment and 4 years of management or experience in a supervisory capacity.

Becton Dickinson offers competitive salaries and an excellent benefits package. For immediate consideration, please send your resume to **Manager, Human Resources, Becton Dickinson Immunocytometry Systems, 2375 Garcia Ave., Mountain View, CA 94043**. An Equal Opportunity Employer.

**BECTON
DICKINSON**

POSITIONS OPEN

MICROBIAL ECOLOGIST: A position for a post-doctoral research associate will be available 1 July 1988 for 2+ years. Interests in physiological ecology or biogeochemistry of marine benthic systems preferred. Experience with biodegradation and anaerobes helpful but not necessary. Send application, curriculum vitae, and three letters of reference to: **Dr. G. M. King, Darling Marine Center, University of Maine Walpole, ME 04573** by 8 April 1988. *An Affirmative Action/Equal Opportunity Employer.*

MOLECULAR BIOLOGY ASSISTANT OR ASSOCIATE PROFESSOR

A tenure-track position is available for an individual interested in studying protein toxins that act on the nervous system. Successful applicant will join a multidisciplinary team composed of investigators from medicine, microbiology, pharmacology, physiology, and neurology. Preference will be given to applicants who are skilled in the areas of sequencing and primary structure determination, site-directed mutagenesis, and in situ hybridization. Interested person should submit curriculum vitae, list of publications, synopsis of research goals, and names of three references to: **Dr. Lance Simpson, Jefferson Medical College, 1025 Walnut Street, Philadelphia, PA 19107.** *Equal Opportunity Employer.*

PALEOZOIC INVERTEBRATE MACROPALEONTOLOGIST

U.S. Geological Survey, Branch of Paleontology and Stratigraphy, announces vacancy for invertebrate macro-paleontologist to study lower and/or middle Paleozoic rocks. Prefer applicants with Ph.D.; must be U.S. citizen. Prefer experienced, field-oriented researcher specializing in established biostratigraphically useful fossil group(s). Salary and grade negotiable based on career experience (salary range \$33,218 to \$60,683 per annum, GS-12 to GS-14). Duty station will be determined at time of selection.

Send application to: **A. G. Harris, U.S. Geological Survey, U.S. National Museum, E-501, Washington, DC 20560.** Telephone: 202-343-3495 by 15 April 1988; must include Standard Form 171 (Personal Qualifications Statement) available from above address or any Federal personnel office and complete list of publications.

The U.S. Geological Survey is an Equal Opportunity Employer.

PHYSIOLOGIST/PHARMACOLOGIST—The Department of Physiology and Pharmacology of The University of South Dakota School of Medicine invites applications for a tenure-track position as assistant/associate professor. A Ph.D. and/or M.D. degree and a minimum of 2 years of postdoctoral experience are required. Preference will be given to candidates with experience in autonomic-cardiovascular pharmacology, endocrinology or molecular biology although candidates with expertise in other areas will be considered. Selection will be based on scientific credentials and the potential to establish an outstanding independent research program. Excellence in teaching is expected. Salary is negotiable. Applicants should arrange to have their curriculum vitae, and names of three references, and a statement of research interests sent to: **Chairman, Department of Physiology and Pharmacology, The University of South Dakota, School of Medicine, Vermillion, SD 57069.** Closing date for applications is 1 June 1988, or until position is filled. *Affirmative Action/Equal Opportunity Employer.*

PLANT GENETICS/SOYBEAN. Applications are invited for a tenure-track ASSISTANT PROFESSOR position (80% research, 20% teaching). A Ph.D. degree in plant genetics or a related field, and a thorough knowledge of fundamental genetics at the whole plant and molecular level is required. Research will be directed toward soybean improvement. Participation in the genetics teaching program is expected. Direct applications to: **Dr. M. W. Phillips, Head, Department of Agronomy, Purdue University, West Lafayette, IN 47907.** Include a résumé, transcripts of all University degrees, and three letters of recommendation. *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

UNIVERSITY OF GUELPH PHYSIOLOGIST

The Department of Animal and Poultry Science at the University of Guelph is seeking applications from physiologists who wish to apply their expertise to study the response of poultry to their environment. Minimum requirements are a Ph.D. or equivalent in physiology. The successful applicant will be expected to develop an active research program integrating the principles of physiology and ethology and to apply these principles to the objective evaluation of poultry production systems. Evidence of ability to liaise with industry will be an asset. In addition the incumbent will be expected to develop a strong teaching programme at both undergraduate and graduate levels in his/her area of competence with application to livestock production.

The position is tenure-track at the assistant/associate professor rank in a department with expertise in the disciplines relating to the care and management of animal species of agricultural importance. The appointee should work closely with colleagues in both the agricultural and veterinary colleges. The University is internationally recognized for its leadership in ethology.

Complete résumé and names of three references should be sent to:

**Dr. R. J. Etches, Chairman
Department of Animal and Poultry Science
University of Guelph
Guelph, Ontario, Canada N1G 2W1**

The closing date for applications is 30 April 1988. Position subject to final budgetary approval.

PHYSIOLOGIST for hospital in northeast Ohio to research effects of experimental drug agents on myocardium following coronary artery occlusion and reperfusion; collect and interpret data; prepare findings for publication if warranted. Requires M.S. in physiology, or M.D. degree (or foreign degree determined to be equivalent to U.S. degree by approved credentials evaluation agency) and 18 months of experience, either in job described or in investigation and suppression of arrhythmia in heart disease and physiology of heart, including 1 year in clinical cardiology and doing Holter monitoring. Must have published two research articles in areas of arrhythmia and Holter monitoring. Forty hours per week, 9 a.m. to 6 p.m. \$23,550 per year. Qualified applicants reply immediately with résumé to: **R. Lechler, JO# 3032218, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

POSTDOCTORAL ASSOCIATE: NIH-funded project to study the neuroanatomy of the brain stem gustatory system. Experiments involve EM-HRP and autoradiography. Experience in neuroanatomy, immunohistochemistry or neurophysiology desirable. Send curriculum vitae and statement of research interests to: **Dr. Mark C. Whitehead, The Ohio State University, College of Dentistry, Department of Oral Biology, 305 West 12th Avenue, Columbus, OH 43210.**

POSTDOCTORAL ASSOCIATE—position is available immediately for research in cellular motility, utilizing microinjection and laser-microsurgery. Research will involve basic mechanistic studies of motility in *Physarum* amoeboid flagellates and amphibian melanophores. General background in cell biology is required, and experience in microinjection technology is highly desirable. Salary is \$20,000 per annum (plus fringe benefits). Send curriculum vitae and three letters of reference to: **Dr. Mark B. Adelman, Department of Anatomy, Uniformed Services University of the Health Sciences (USUHS), 4301 Jones Bridge Road, Bethesda, MD 20814-4799.** *The USUHS is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOW: Cellular pharmacology of prolactin related to proliferation, drug effects, i.e., TCDD and cyclosporine on receptor binding, PKC, ornithine decarboxylase. Cell culture, RIA or EIA, Western and Northern blots. Opportunity to uncover new insight into cell function related to proliferative diseases. Salary commensurate with NIH guidelines. Résumé to: **Diane H. Russell, Ph.D., Chair, Department of Pharmacology and Therapeutics, University of South Florida College of Medicine, 12901 30th Street, MDC-9, Tampa, FL 33612.**

POSITIONS OPEN

POSTDOCTORAL FELLOW MOLECULAR NEUROBIOLOGY. A position immediately available for study of molecular biology of glycoproteins involved in neuron-glia interactions, myelination, and demyelination. Studies include determination of gene structure, structure-function relationship and regulation of alternative splicing. Techniques include DNA sequencing, in vitro mutagenesis, and in vitro DNA amplification. Candidates should have some experience in protein biochemistry and/or molecular biology. Send curriculum vitae and letters of reference to: **Dr. Kari Stefansson, Department of Neurology, University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637.** Telephone: 312-702-6387.

POSTDOCTORAL POSITION available to study cell cycle control of DNA replication and cellular aging in yeast. Research involves techniques in molecular and yeast genetics, and includes analysis of protein-DNA interactions and gene expression. Send curriculum vitae, including bibliography, and names, addresses, and telephone numbers of three references to: **Dr. S. Michal Jazwinski, Department of Biochemistry and Molecular Biology, Louisiana State University Medical Center (LSUMC), 1901 Perdido Street, New Orleans, LA 70112.** *LSUMC is an Equal Employment Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION CASE WESTERN RESERVE UNIVERSITY (CWRU) DEPARTMENT OF MEDICINE AND BIOCHEMISTRY

The Division of Pulmonary of the Department of Medicine and the Department of Biochemistry at University Hospitals and Case Western Reserve University are seeking a postdoctoral fellow with experience in molecular biologic approaches and protein biochemistry. This person would join a multidisciplinary team. The traditional emphasis of this group has been regulation of the cellular immune response and mononuclear phagocyte effector mechanisms. The postdoctoral fellow would participate in studies to define macrophage-surfactant interactions associated with immune regulation of the lung. *CWRU is an Affirmative Action/Equal Opportunity Employer.* Send curriculum vitae to: **Dr. E. A. Rich, Department of Medicine, University Hospitals, 2074 Abington Road, Cleveland, OH 44106.**

POSTDOCTORAL POSITION available to study the physical properties and molecular biology of the somatostatin receptor. Background in biochemistry or molecular biology required. Salary is negotiable. Send curriculum vitae and letters of recommendation to: **Dr. Terry Reisine, 103 John Morgan Building, Department of Pharmacology, University of Pennsylvania School of Medicine, Philadelphia, PA 19104.**

The University of Pennsylvania is an Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately for cloning and characterizing genes expressed during pollen development. One year, with possibility for extension. Recombinant DNA experience required. Salary \$20,000 to \$21,000. Send curriculum vitae and names of three references to: **Dr. Joseph P. Mascarenhas, Department of Biological Sciences, State University of New York at Albany, Albany, NY 12222.** *An Equal Opportunity/Affirmative Action Employer. Applications from women, minority persons, handicapped persons, and special disabled or Vietnam era veterans are especially welcome.*

POSTDOCTORAL POSITIONS (three) available to study molecular and/or evolutionary genetics of *Drosophila*. Roles of cis- or trans-acting elements, DNA-protein interactions, and chromatin structure will be studied in two systems: (i) Adh in cell lines (**Benyajati**); (ii) The Responder locus of Segregation Distorter (**Wu**). SD project has a population genetic component. Ph.D. in genetics, molecular biology or biochemistry is required. Contact: **Drs. C. Benyajati or C. Wu, Department of Biology, University of Rochester, Rochester, NY 14627.**

Equal Opportunity Employer M/F

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DIAGNOSTICS RESEARCH SCIENTIST

Marion Laboratories, Inc., a leader in the rapidly expanding, high technology segment of the health care industry, currently has a position available for a Research Scientist in our Diagnostic Affairs Department within the R&D Division. This position will be located in Kansas City, Missouri.

Primary responsibilities will include the development of solid phase immunoassays for infectious diseases, the transfer of developed tests to manufacturing, and interacting with Q.A., Regulatory, Operations and outside investigators.

Candidates must have a Ph.D. in Microbiology, Immunology, Biochemistry, or related field and three years of industry experience developing solid phase immunoassays or a Master's degree and five years relevant industry experience. Experience in the purification and chemical modification of polyclonal and monoclonal antibodies is desirable.

We offer a complete compensation and benefits package to include bonus, stock options, profit sharing, comprehensive group health, dental and life insurance. Qualified candidates should submit a detailed resume including salary history to: **Marion Laboratories, Inc., Recruiting and Placement, Dept. CGU, P.O. Box 9627, Kansas City, MO 64134.** Equal Opportunity Employer.

 **Marion
Laboratories, Inc.**

The *Uncommon* Company

Research At Genetics Institute Is Research At Its Best



As one of the premier biopharmaceutical companies in the United States, the research opportunities at Genetics Institute are unparalleled. Collaborating with the most respected scientists in the field, you will work on the leading edge of today's most innovative application of scientific discovery — the development of human therapeutics through recombinant DNA technology.

In addition to the dynamic strides we've made in the research and development of these therapeutics, we have the capabilities to perform large-scale clinical manufacturing which affords our scientists the unique opportunity to watch their findings develop from conception through completion — that is research at its best.

PROTEIN PURIFICATION

We are seeking a creative individual to develop purification schemes for novel pharmaceuticals, such as blood cell differentiation factors and thrombolytic agents. Suitable applicants will have a Ph.D. degree, a strong background in protein biochemistry and extensive experience in protein purification. The position carries direct responsibility for developing procedures for purification of both bacterial and mammalian expressed proteins, up to the point at which clinical production commences. Beyond this point there will be on-going responsibility for biochemical aspects of the large-scale production process. It is essential that applicants for this key position have an understanding of purification scale-up and the ability to effectively interact with personnel in other disciplines, especially engineering and production. There will also be considerable opportunity to interact with peptide and carbohydrate chemists, as well as cell biologists, in exploring structure/function relationships of proteins of interest.

STRUCTURAL PROTEIN CHEMISTRY

Opportunities exist for motivated and talented individuals at all levels (B.S., M.S., Ph.D.), ideally with backgrounds in structural protein chemistry, e.g., protein sequencing, amino acid composition analysis, peptide mapping strategies and protein modification. However, candidates with strong chemistry backgrounds and skills in analytical chromatography and instrumentation will also be considered. This position will offer scientists the challenge of interacting with experts in other disciplines (e.g., mass spectrometry, carbohydrate chemistry, protein biochemistry and cell biology) and the responsibility for taking a project from conception to completion.

BIOPOLYMER MASS SPECTROMETRY

We are currently accepting applications from scientists with expertise in mass spectrometry to undertake projects involving the characterization of mammalian and bacterially expressed proteins. Candidates must possess a Ph.D. in a chemical or biochemical discipline and appropriate training and experience in biopolymer mass spectrometry, preferably with sector-type instrumentation. Responsibilities include the development of novel instrumental and chemical mass spectrometric methods to define the protein and/or carbohydrate structures of cell differentiation factors and thrombolytic agents. The successful candidate will be expected to assume responsibility for the planning and execution of scientific projects. Since this position involves substantial interaction with scientists from other disciplines, applicants must have strong interpersonal skills as well as excellent oral and written communication skills.

Genetics Institute offers an attractive compensation and benefits package including equity participation and an excellent opportunity for personal and professional growth. Qualified applicants should forward their resumes, in confidence, to Sheri Rist, Genetics Institute, 87 CambridgePark Drive, Cambridge, MA 02140.

An Equal Opportunity Employer

Genetics Institute

**MOLECULAR BIOLOGISTS
STAFF FELLOW/SENIOR STAFF FELLOW
NATIONAL INSTITUTES OF HEALTH
PUBLIC HEALTH SERVICE**

Fellowships available for experienced molecular biologists for a megabase DNA sequencing project involving automated DNA sequence analysis of neurotransmitter receptor genes (PNAS 84 8296-8300, 1987) and of disease loci of human chromosomes and for site directed mutagenesis studies involving adrenergic and muscarinic cholinergic receptors (JBC 263, 4052-4055, 1988)

Applicants must be U.S. citizens or resident aliens
Initial appointment is for two years with extensions possible up to 7 years

Starting salary will be commensurate with experience
For staff fellows (less than 3 years postdoctoral experience)
\$20,000 to \$37,997

For senior staff fellows (over 3 years postdoctoral experience)
\$24,000 to \$42,600

For further information and qualifications call
Janet Clagett, NINCDS Personnel Office
301-496-6334

Applicants should send their curriculum vitae and names of three references to

J. Craig Venter, Ph.D., Chief

**Receptor Biochemistry and Molecular Biology Section
Laboratory of Molecular and Cellular Neurobiology
National Institute of Neurological & Communicative Disorders & Stroke
NIH**

**Park Building, Room 405
Bethesda, Maryland 20892**

NIH IS AN EQUAL OPPORTUNITY EMPLOYER



**DEPARTMENT HEAD
ENTOMOLOGY
UNIVERSITY OF ARIZONA**

The University of Arizona invites applications and nominations for the position of Head of the Department of Entomology, College of Agriculture. A scientist with a strong appreciation of and willingness to support both the basic and economic phases of entomology is sought to lead the department in research, teaching and extension and strengthen its international reputation.

The head is expected to take a leadership role in facilitating studies of insect science throughout the University via participation in the Center for Insect Science, a newly established pan-collegiate interdisciplinary instruction and research program.

Submit curriculum vitae, the names, addresses and telephone numbers of six references, and a statement of qualifications and goals to Dr. M. A. Wells, Chairman Entomology Search Committee, Department of Entomology, Forbes Building, University of Arizona, Tucson, Arizona 85721. The committee will begin considering applications on April 30, 1988, but will accept applications until the position is filled.

The University of Arizona is an Equal Opportunity/Affirmative Action Employer. Women and minorities are especially encouraged to apply.

Enzymologist/ Protein Chemist

The Medicinal Chemistry Department of Smith Kline & French Laboratories, has excellent career opportunities for persons with experience in protein purification, enzymology, and enzyme kinetics to work in a state-of-the-art research facility near the Philadelphia suburb of Valley Forge. The selected individuals will assist in the design of molecules destined to interrupt enzymatic processes; isolate and characterize enzymes; analyze interactions between molecules and potential biological targets; and effectively communicate results.

The successful candidates will possess:

- B.S. in Biochemistry or Bio-organic Chemistry with 1 to 3 years laboratory experience.
- Minimum 2 years experience in enzyme/protein purification and characterization.
- Experience in the development of specific enzyme assays, preferably including the use of low levels of radioisotopes.
- Experience in modern analytical methods such as HPLC, protein electrophoresis and chromatography.
- Working knowledge of biological reaction mechanisms and enzyme kinetics is preferred.
- Excellent oral and written communications skills are required

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. For confidential consideration, please forward your resume and the names of three references to Ms. Angela Varrichio, Associate Employment Administrator, V0014, SK&F Laboratories, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an equal opportunity employer, M/F/H/V.

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Opportunities in Immunology, Molecular Biology and Protein Biochemistry

SECTION HEAD— CARTILAGE BIOLOGY (IAA)

The candidate should have an MD or PhD with at least 10 years of post-doctoral experience. Scientific productivity, the ability to collaborate, and management skill should be demonstrable through publications, the achievement of substantial grant support, and/or group leadership. An international reputation for work in the areas of osteoarthritis or cartilage degradation is essential, with experience in drug development preferred. The candidate will be expected to staff the section and initiate a basic research program designed to elucidate new approaches to drug development. Salary is negotiable commensurate with qualifications.

SECTION HEAD—SUPPRESSOR T-CELL REGULATION (IAA)

Qualifications consistent with the above description are sought. The candidate's scientific reputation should lie in the areas of T-cell suppressor circuits or suppressor factor biochemistry with knowledge and interest in the study of autoimmune disease, esp. rheumatoid arthritis.

SENIOR SCIENTISTS— MOLECULAR BIOLOGY (MTI)

Minimum requirements are a PhD and 2 years of post-doctoral training. Experience in molecular biology, molecular genetics of mammalian cells, or protein biochemistry is preferred. Candidates will be expected to work independently on projects involving isolation and analysis of mammalian genes at all levels, including cloning and sequencing, analysis of expression, and gene transfer.

Molecular Diagnostics Inc. (MDI), Molecular Therapeutics Inc. (MTI), the Institute for Arthritis and Autoimmunity (IAA), and Miles Institute for Preclinical Pharmacology (MIPP) are advanced research institutes which collectively comprise the newly-formed Miles Research Center in West Haven, CT. The Center functions as a major research resource of Bayer AG of West Germany and its subsidiary, Miles Inc. It is located in a newly-constructed facility which is the first of several such facilities to be built at the West Haven site.

MDI and MTI are engaged in biotechnology research; the newly-formed IAA is dedicated to the discovery of new targets for drug therapy. Areas of interest include molecular and cellular genetics, nucleic acid chemistry, cell biology, immunology and protein chemistry. The individual institutes function collaboratively with each other, and with other research entities of the Bayer group.

The Center is engaged in a major expansion of its staff and offers outstanding opportunities to candidates with appropriate credentials, as described below:

JUNIOR SCIENTIST— BIO-ORGANIC CHEMISTRY (MDI)

We are also seeking a postdoctoral-level research scientist with a PhD degree in organic chemistry or biochemistry. Experience in the area of nucleic acid chemistry and/or heterogeneous phase reaction is desirable.

RESEARCH ASSOCIATES (MDI and MTI)

Applicants must have BS or MS degree and at least 1 year experience. Proficiency in recombinant DNA techniques, tissue culture, protein chemistry, or assay development is desirable.

Applicants should be able to function in an informal but challenging research environment with strong academic ties. The positions offer attractive compensation, generous benefits, and excellent opportunities for personal growth. Resumes should be forwarded to Research Director, DDW, Miles Research Center, 400 Morgan Lane, West Haven, CT 06516.



An Equal Opportunity Employer M/F/H/V

**Research
Center**

POSITIONS OPEN

POSTDOCTORAL POSITION to study the enzymology of parvovirus DNA replication and/or mammalian DNA polymerase α -primase. Submit curriculum vitae and three letters of reference to: **Dr. Emanuel A. Faust, Department of Biochemistry, Dalhousie University, Halifax, Nova Scotia, B3H 4H7.**

POSTDOCTORAL POSITION: To study aging. Position will involve research on the molecular basis of progeria, a premature aging syndrome. The research will involve cell culture studies of abnormal glycosaminoglycan metabolism and molecular genetic approaches. A background in biochemistry and/or molecular biology is desirable. Position is for 3 years, with a beginning salary of \$23,000. Available immediately. Reference #517.

Send curriculum vitae and three references to:

Dr. W. Ted Brown, Chairman
Department of Human Genetics
NYS Institute for Basic Research
In Developmental Disabilities
1050 Forest Hill Road
Staten Island, NY 10314

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 in a group studying mechanism and regulation of eukaryotic protein synthesis. Projects involve the mechanism of mRNA entry, regulation of initiation factor activity by phosphorylation, effect of picornaviruses on initiation, cloning of initiation factor genes, and regulation of initiation factor levels in vivo. Experience in protein chemistry, protein biosynthesis or molecular biology desirable. Salary is competitive and commensurate with experience. Send curriculum vitae and names of three references to: **Dr. Robert E. Rhoads, Department of Biochemistry, University of Kentucky College of Medicine, Lexington, KY 40536-0084.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION in neurobiology at Washington University available 1 July 1988. Trophic interactions of mammalian motor neurons and autonomic ganglion cells will be studied utilizing a variety of neuroanatomical techniques including intracellular staining. Send curriculum vitae and references to: **Dr. William Snider, Department of Neurology, Box 8111, Washington University School of Medicine, 660 South Euclid, St. Louis, MO 63110.**

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 for studies of epithelial cell biology using biochemical and immunological techniques. Emphasis will be placed on the metabolism of extracellular matrix components by normal and mutant ocular tissues, both in vivo and in vitro. Send curriculum vitae and the names of three references to: **Dr. L. Stramm, Department of Ophthalmology, University of Pennsylvania, 51 North 39th Street, Philadelphia, PA 19104.**

POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY AND BIOCHEMISTRY to isolate and characterize certain amine neurotransmitter receptors. Experience with cloning techniques, protein chemistry, and biochemical pharmacology is desirable. Harvard Medical School appointment. Send résumé, summary of research experience and three reference letters to: **Dr. James Nathanson, Neuropharmacology Research Laboratory, Massachusetts General Hospital, Boston, MA 02114.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION IN NEUROPHARMACOLOGY available for studies on the role of atropine in the brain and eye. Experience with biochemical and physiological pharmacological techniques, including ligand binding, second messengers, protein phosphorylation, and measurement of fluid dynamics is desirable. Harvard Medical School appointment. Send résumé and three references to: **Dr. James Nathanson, Neuropharmacology Research Laboratory, Massachusetts General Hospital, Boston, MA 02114.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION IN REPRODUCTIVE ENDOCRINOLOGY

Available immediately to Ph.D. to study hormone production by the fetoplacental unit during baboon pregnancy. Experience with primates not necessary but background in endocrinology essential. Send curriculum vitae to:

Gerald J. Pepe, Ph.D.
Department of Physiology
Eastern Virginia Medical School
P.O. Box 1980
Norfolk, VA 23501

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POSTDOCTORAL POSITION TUMOR VIROLOGY

Available immediately, we have recently discovered RNA covalently bound to SV40 TAG and to the oncogene product p53. The RNAs, the bonding and the possible significance to oncogenic transformation will be studied. Stipend in the range \$20,000 to \$26,000. Send curriculum vitae and names of three references to:

Dr. Robert Carroll
Department of Pathology
New York University Medical School
550 First Avenue
New York, NY 10016

POSTDOCTORAL POSITIONS available immediately for studies of HIV immunochemistry and immunobiology. Areas of research interests include development of an effective synthetic peptide vaccine (**Dr. Gordon Dreesman**); idiotype-anti-idiotypic network, gene cloning, immunoglobulin variable region sequencing, and peptide chemistry (**Dr. Ronald C. Kennedy**); definition of HIV B and T cell epitopes, murine and human monoclonal antibodies and human T cell cloning (**Dr. Tran C. Chanh**); and simian immunodeficiency virus (**Dr. Jonathan S. Allan**). Annual salaries range from \$20,500 to \$23,920, dependent upon experience. Please mail curriculum vitae with names and telephone numbers of three references to: **Personnel Director, Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284.** *Equal Opportunity Employer M/F.*

POSITIONS OPEN

POSTDOCTORAL POSITION—RESEARCH ASSOCIATE Clinical laboratory and research center to develop new testing procedures in the fields of oncology, experimental hematology, and immunology. This is a definite goal-oriented position for 2 years. If successful, then partnership position available. Send curriculum vitae and other appropriate records in confidence to: **Dr. Michael E. Trigg, Molecular Medicine, Inc., 5606 Shields Drive, Bethesda, MD 20817.**

POSTDOCTORAL RESEARCH ASSOCIATE

Position available to study the biochemistry, regulation, and molecular biology of red blood cell membranes and membrane-skeletal proteins. Applicants with experience in protein biochemistry, biological membranes, protein kinases and molecular biology (especially site-directed mutagenesis) are encouraged to apply. Opportunity to join an established group in a well-equipped and active department. Position available immediately. A highly competitive salary appropriate to experience will be offered. Send curriculum vitae and names of three references to: **Carl M. Cohen, Ph.D., Chief, Division of Cellular and Molecular Biology, St. Elizabeth's Hospital, 736 Cambridge Street, Boston, MA 02135.** *Equal Opportunity Employer.*

UNIVERSITY OF LEICESTER POSTDOCTORAL RESEARCH ASSOCIATE

Applications are invited from candidates with a strong background in immunology to join a research group investigating the design of novel protein antigens for immunoprophylaxis and diagnosis of parasitic and bacterial diseases. The successful applicant should preferably have had 1 to 2 years of postdoctoral experience and have an interest in protein structure, epitopic domains or immune responses. He/she will be expected to contribute expertise to the immunological analysis of genetically engineered antigens.

The appointment (funded by the Wellcome Trust) is available from 1 April 1988 for 3 years, and will have a starting salary of up to £12,760 per annum, depending on qualifications and experience (IA Research Associate scale £9,865 to £15,720 per annum—effective from 1 March 1988).

Further details may be obtained from: **Dr. T. R. Hirst (0533)-523431.**

Applications, including a full curriculum vitae, and the names, addresses, and telephone numbers of two referees, should be sent to: **Dr. T. R. Hirst, Department of Genetics, University of Leicester, Leicester LE1 7RH, England.**

POSTDOCTORAL RESEARCH ASSOCIATE.

Ph.D. in analytical chemistry with 2 years of experience pre- or postdoctoral in the operation of phase-modulation and phase-resolved spectrofluorimetric instrumentation, fluorescence polarization, and immunochemical and micellar reagents. Conduct research in the area of chemical analysis including fluorescence spectroscopy using phase-modulation and phase-resolution techniques, studies of immunochemical and micellar systems, and the use of microcomputers in conjunction with the experiments. Forty hours per week. Salary: \$25,000 per year. Apply: **Employment Security Commission, 516 North Mangum Street, Durham, NC 27701** or your local job service office. Refer to: **Job order # NC7101845, DOT code 090.227-010.** If not a U.S. citizen, indicate visa status. *Equal Opportunity Employer/Affirmative Action.*

POSTDOCTORAL RESEARCH ASSOCIATE POSITION available to study growth factor-oncogene interactions and signalling mechanisms involved in cell proliferation and transformation. The research involves use of recombinant DNA technology and recombinant retroviruses in eukaryotic tissue-culture systems. Candidates must have a Ph.D. with a background which includes molecular biology, somatic cell genetics, mammalian mutagenesis and gene expression systems and retrovirology, as well as regulation of genes, immunology and FACS. Submit résumé, research interests, transcripts, and names of three references to: **Dr. M. J. Weber, Department of Microbiology, Box 441, University of Virginia School of Medicine (UVA), Charlottesville, VA 22908.** *UVA is an Equal Opportunity Employer.*

BIOPROCESS DEVELOPMENT



offmann-La Roche, a prestigious leader in the research and production of pharmaceuticals, vitamins and fine chemicals has three opportunities in Bioprocess Development for individuals with excellent communication skills and the desire to work in a team environment.

FERMENTATION ENGINEER

Your primary responsibilities will include the development of fermentation processes, scale-up of conventional and rDNA projects, maintenance/upgrading of state-of-the-art pilot scale fermentors, technology transfer, evaluation of new technology and supervision of support personnel. To qualify, you should possess a PhD in Chemical/Biochemical Engineering with an appropriate background in Fermentation, or an MS with relevant experience; knowledge of computer hardware and software is preferred. **Please refer to Position ABD on envelope and resume.**

SCIENTIST

You will be responsible for the isolation and purification of recombinant proteins on small and pilot scales. To qualify, you must have an MS in Biochemistry plus 7 years of relevant experience, or a BS with 10 years of experience. Knowledge of HPLC, FPLC, SDS-PAGE, isoelectric focusing and conventional chromatography is necessary. **Please refer to Position BBD on envelope and resume.**

ASSOCIATE SCIENTIST

Working on similar projects as the above Scientist, you'll need an MS in Biochemistry plus 3 years, or a BS with 6 years of relevant experience. **Please refer to Position CBD on envelope and resume.**

For consideration, please send your resume, indicating salary history/requirements (those without this information will not be acknowledged) and position of preference to: **Eleanor M. Malone, Professional Employment and Staffing Specialist, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.** We are an equal opportunity employer.



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PhD ENZYMOLOGISTS

Du Pont's Central Research and Development Department has immediate openings for experienced PhD enzymologists to develop biocatalytic routes to pharmaceutical intermediates. Positions are available in the following areas—

Mechanistic Enzymology — Requires a strong background in biochemistry, chemistry and kinetic assay design, and experience in enzyme inactivation and stabilization.

Biocatalysis — Requires a working knowledge of enzyme kinetics, purification/characterization, and experience in process scale-up, enzyme immobilization and catalytic use of enzymes.

Enzyme Production — Requires experience identifying and purifying enzymes from novel sources, and the ability to select and grow microorganisms for enzyme production. Experience in large scale fermentation and cloning in high expression systems is preferred.

Successful candidates will become members of an interdisciplinary development team, and must possess demonstrated creativity and problem-solving abilities. Post-doctoral experience is desired.

At Du Pont you'll find a stimulating scientific environment in a modern research facility located near Wilmington, DE. Our Mid-Atlantic location offers a wide range of academic, cultural and recreational activities. We provide excellent compensation, benefits and relocation assistance. Qualified candidates should send a curriculum vitae with three references to Dr. David Anton, c/o Professional Staffing Section, Employee Relations Department, Room X-51121, Du Pont Company Wilmington, DE 19898.



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

POSITIONS OPEN

POSTDOCTORAL POSITIONS. Available immediately to study alterations in the synthesis and processing of salivary and gastrointestinal mucins in cystic fibrosis, gastrointestinal disease, and alcoholism. Candidates with experience in biosynthetic and molecular biology techniques, phospholipid metabolism, membrane receptors, and immunochemistry are desirable. Send résumé, statement of research interests, and references to: **Dr. Amalia Slomiany, Department of Medicine, New York Medical College, Valhalla, NY 10595.**

YALE UNIVERSITY SCHOOL OF MEDICINE DEPARTMENT OF THERAPEUTIC RADIOLOGY

POSTDOCTORAL/RESEARCH ASSOCIATE: Exciting opportunity for Ph.D. with experience in cell biology/protein chemistry/molecular biology to join in the establishment of a vascular molecular biology laboratory at Yale University Medical School. Investigations in basic growth regulatory mechanisms, biochemistry and radiobiology of blood vessel cells. Academic appointment and competitive salary. Please send curriculum vitae to: **Dr. Eliot M. Rosen, Department of Therapeutic Radiology, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.**

POSTGRADUATE AND FACULTY RESEARCH PROGRAM AT THE AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY—ATSDR is a new agency of the Public Health Service based in Atlanta created to implement health-related sections of laws that protect the public from hazardous wastes or environmental spills of hazardous substances. Immediate openings are available for those with experience in toxicology, epidemiology, health education, and related areas. U.S. citizenship or PRA status is required. For more information and applications contact (please indicate if faculty or postgraduate): **Research Participation Program/ATSDR, University Programs Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117. Telephone: 615-576-3190.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE position available immediately in fatty acid biochemistry. Background in arachidonic acid metabolism, prostaglandin biochemistry, omega-3 fatty acid metabolism, and GC/MS analysis desirable. Studies will include arachidonic acid and omega-3 fatty acid metabolism in platelets, vascular tissue and monocytes, and their relationship to thrombosis and atherosclerosis. Send curriculum vitae and names of three references to: **Victor A. Skrinska, Ph.D., Cleveland Research Institute, 2351 East 22nd Street, Cleveland, OH 44115.**

OREGON HEALTH SCIENCES UNIVERSITY POSTDOCTORAL RESEARCH POSITIONS

Available to study the actions of EGF and TGF β in transmembrane signalling and control of gene expression. Requires combined application of recombinant DNA techniques and biochemical analysis of second messengers, including calcium and phospholipids. Expertise in one of these areas required. Salary commensurate with experience. Please send curriculum vitae and the names of three references to: **Dr. Bruce E. Magun, Department of Cell Biology and Anatomy, L215, Oregon Health Sciences University, Portland, OR 97201. An Equal Opportunity/Affirmative Action Employer.**

PRODUCT MANAGER— PHYSIOLOGICAL RESEARCH AND MEDICAL INSTRUMENTS

Excellent opportunity in established company (50 employees) to launch new division of PC-based computer automation products for scientific and medical applications. Explosive growth potential.

Successful candidate will be a highly motivated and organized "doer" with strong writing and computer skills.

Ph.D. in one of the physiological sciences desirable. Strong background in electronics a plus.

No previous experience in product management or marketing is required. Chicago location.

Please submit résumé and salary history in confidence to: **Box 48, SCIENCE.**

POSITIONS OPEN

PROTOZOOLOGIST/MOLECULAR BIOLOGIST. Full-time tenure-track faculty position. Assistant/associate professor, starting 1 July 1988 or thereafter in Department of Tropical Medicine. Qualifications: Ph.D. or equivalent in protozoology with specialty in molecular biology, postdoctoral experience, publications. Responsibilities include participating in teaching medical protozoology to graduate and medical students, teaching course in specialty, developing competitive research program, and directing graduate students' research. Opportunity to participate in department's overseas programs. Send curriculum vitae to: **Chairman, Search Committee, Department of Tropical Medicine, Tulane University School of Public Health and Tropical Medicine, 1501 Canal Street, New Orleans, LA 70112. Deadline is 1 May 1988, or until filled. Tulane University is 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 PROFESSOR OF SURGERY. The Department of Surgery, University of Health Sciences/The Chicago Medical School has an opening for a Ph.D. biochemist or physiologist with expertise in molecular biology to head the Surgical Research Laboratory. Tenure-track position. The department has strong research interests in applied biochemistry and molecular biology. Send curriculum vitae, copies of pertinent publications, summary of past and present research projects, and three personal references to: **William Schumer, M.D., Professor and Chairman, Department of Surgery, University of Health Sciences/The Chicago Medical School, 3333 Green Bay Road, North Chicago, IL 60064.**

Project Manager

The Project Management Department of Smith Kline & French Laboratories is seeking a Ph.D. to assist Project Leaders in the design and management of drug development strategies and in the identification of project milestones and objectives. Primary responsibilities include ensuring that projects remain on schedule by identifying problems and determining optimal solutions; coordinate and manage the submission of plans, modifications to plans, and progress reports to Project Management; maintain awareness of key issues for all R&D Projects and their potential impact on availability of R&D resources; ensure Project-related activities and events are adequately documented and archived; and conduct special projects.

The successful candidate will have:

- Ph.D. in a biomedical science or equivalent training and experience required.
- At least 4 years experience beyond Ph.D. in a biomedical field required.
- Experience managing multidisciplinary teams is preferred.
- Ability to act independently as evidenced by the design and execution of projects in areas of expertise required.
- Proven analytical, interpersonal, leadership and communication skills required.
- Previous project management experience in the pharmaceutical industry preferred.

Smith Kline & French Laboratories, a world leader in pharmaceutical research and development is located in a state-of-the-art research complex near Valley Forge, PA. We offer an excellent compensation, benefits and relocation package as well as outstanding opportunities for professional growth and development. Qualified candidates should send resume to: **Marianne J. Shandy, Manager, Personnel Relations, J0001, 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.**

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POST DOCTORAL SCIENTIST DRUG DELIVERY

Amgen is a dynamic leader in the biotechnology industry. Our leadership in the development of Erythropoietin and other products for human and animal health care has placed us firmly at the forefront of the industry. Because of our rapid growth, we have an immediate opportunity for a Post Doctoral Scientist in our Drug Delivery Group.

Qualified applicants must have a Ph.D. in Chemistry or Biochemistry and an interest in fundamental studies of controlled drug delivery. The fields of interest include polymer synthesis and biodegradation, synthetic and biological membrane transport processes and mechanisms of self-regulated drug delivery. Post doctoral positions are one year appointments renewable for a second year.

Amgen offers a challenging and rewarding research environment as well as an excellent compensation and benefits package. **Amgen** is located about an hour northwest of Los Angeles in the scenic Conejo Valley. Qualified candidates should send a c.v., including three references, in confidence to:

**Recruitment, Dept. #35
AMGEN
1900 Oak Terrace Lane
Thousand Oaks, CA 91320**

Equal Opportunity Employer



Research Professionals

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

Research Assistants and Postdocs

Research Assistants and Postdocs are needed in the Endocrine Group to run bio- and immunoassays; an advanced degree in science and two years' experience are prerequisites. A Postdoctoral position is also available for a scientist devoted to any of the following areas: cell signaling, linear growth, animal modeling, primate parturition, endocrine control of immune function, bone or nutrition.

Scientists

Three Scientist positions are available in the Endocrine Group in the areas of bone, linear growth and parturition. Demonstration of leadership in the field, and practical experience with relevant assays is essential.

Please send curriculum vitae and three letters of reference by April 25, 1988, to: Eric Mankuta, Human Resources, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. An equal opportunity employer.

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Senior Biochemist Cholesterol Metabolism

The Squibb Institute for Medical Research is recognized internationally as a leader in developing novel therapeutic agents for the treatment of cardiovascular diseases. We have recently expanded further our interest in the cardiovascular areas to include hyperlipidemia and related diseases. Consequently we are seeking an experienced biochemist to develop animal systems for the study of investigational drugs in cholesterol metabolism disorders.

Qualified individuals should have a Ph.D. in Biochemistry or a related discipline and a minimum of one year post doctoral experience in lipid biochemistry. Direct experience with experimental animal models is required.

The highly challenging opportunity demands a creative approach to the study of cholesterol metabolism and a strong interest in the development of anti-hypercholesterolemic drugs. Squibb is located in Princeton, NJ, a pleasant semi-rural setting convenient to both New York City and Philadelphia. In addition to an excellent salary and comprehensive benefits package, we can offer the opportunity for exceptional scientists to pursue stimulating careers.

For consideration, please submit your curriculum vitae to: **The Squibb Institute for Medical Research, Human Resources Department 799, P.O. Box 4000, Princeton, NJ 08543-4000.** An equal opportunity employer.



SQUIBB

Where science comes to life.

Postdoctoral Scientist Protein Chemistry

XOMA Corporation, a leading biotechnology company situated in the San Francisco Bay Area, is seeking a Postdoctoral Scientist to join an existing research group involved in the design and development of new cytotoxic molecules for therapeutic use.

XOMA considers postdoctoral studies important in an individual's career development and the publication of findings is encouraged.

The appointment is for one year, renewable for a second year.

The position is available immediately.

The successful candidate should have:

- A recent Ph.D. in Molecular Biology, Biochemistry, or related discipline.
- A strong biochemical background, with experience in protein purification and characterization, cultivation of micro-organisms, and recombinant DNA techniques.
- Excellent academic record, strong communication skills and a capacity for independent study.
- Experience in the field of toxin molecular biology is desirable.

We offer excellent compensation and benefits. For confidential consideration, send your C.V. to:

**Director of Human Resources
XOMA Corporation**

EOE 2910 Seventh St., Berkeley, CA 94710



XOMA

C O R P O R A T I O N

POSITIONS OPEN

The Department of Pathology at the Uniformed Services University of the Health Sciences is seeking to hire a **RESEARCH ASSISTANT PROFESSOR**. The individual is to join existing research effort to study areas of molecular genetics of a cancer-prone family, molecular mechanism of cellular radiation resistance, and/or the involvement of oncogenes in human malignancies. The salary range for this position is \$25,000 to \$34,000 depending on background and experience. Individuals (three or more years of postdoctoral experience) with background in molecular genetics, biochemistry, microbiology, and differentiation are encouraged to apply. Send curriculum vitae, a description of current research activities, and the names of three references to: **Civilian Personnel, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814-4799**. Deadline: 1 May 1988.

RESEARCH ASSISTANT PROFESSORS

Applications are invited for a cell neurophysiologist, and a molecular neurobiologist to study (i) the structure and function of cerebellar auditory area, and (ii) sensory transduction in acoustic receptor cells in the auditory periphery. Projects are conducted in a multidisciplinary setting within the Division of Structural and Systems Biology and the Division of Molecular Biology and Biochemistry. Practical experience in one or more of the following areas are desirable, (i) electrophysiology of vision, (ii) intracellular recording and staining, (iii) in situ hybridization, (iv) patch clamping of dissociated cells, (v) protein chemistry, (vi) molecular genetics. Duties will include light team-teaching. Send curriculum vitae and names of three references to: **C. Huang, School of Basic Life Sciences, 109 BSB, University of Missouri-Kansas City, Kansas City, MO 64110-2499**. Deadline is 15 May 1988 or until positions are filled. *Equal Opportunity Employer*.

RESEARCH ASSOCIATE position available for work on tissue specificity and physiological control of respiratory chain enzymes. Experience in mitochondrial research and/or protein chemistry essential. Ph.D. required. Salary according to NIH guidelines. Send résumé to: **Dr. R. Capaldi, Department of Biology, University of Oregon, Eugene, OR 97403**. Closing date: 22 April 1988. *An Equal Opportunity/Affirmative Action Employer*.

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 to study mechanisms of cell-mediated immune responses to HIV as part of a large epidemiologic investigation of HIV infection in homosexual men. Faculty nontenure-track position, 2 to 3 years duration, available 1 June 1988. Ph.D. required. Salary \$22,000 per year. Send curriculum vitae and names of three references to: **Dr. Charles Rinaldo, Department of Infectious Diseases and Microbiology, A417 Crabtree Hall, University of Pittsburgh, Graduate School of Public Health, Pittsburgh, PA 15261**. *An Affirmative Action/Equal Opportunity Employer*.

RESEARCH POSITION

We are establishing a basic cerebrovascular research laboratory for the study of neural ischemia or cerebral blood flow. Newly constructed space, equipment support and a competitive salary are available. Funded or experienced M.D.'s or Ph.D.'s are desirable. Three references and curriculum vitae are necessary. Contact: **Dr. John B. Selhorst, Professor and Chairman, Department of Neurology, St. Louis University, 3660 Vista Avenue, St. Louis, MO 63110**.

POSITIONS OPEN

RESEARCH ASSOCIATE MOLECULAR BIOLOGY/BIOCHEMISTRY

The Department of Pathology, College of Veterinary Medicine, Cornell University, has a position for a molecular biologist to collaborate in the study of the pathogenesis of X-linked (**Duchenne**) muscular dystrophy, using a unique model system. Competence in molecular genetic techniques required. Experience in protein biochemistry, ability to work independently preferred. Salary commensurate with experience: \$20,000 to \$25,000 per year. Available immediately. Send letter of application, résumé, three letters of recommendation to: **Barry J. Cooper, Department of Pathology, College of Veterinary Medicine, Cornell University, Ithaca, NY 14853-6401**. Telephone: 607-253-3350. *Cornell University is an Equal Opportunity/Affirmative Action Employer/Educator*.

RESEARCH ASSOCIATE

Ph.D. in biochemistry, available immediately. Experience in molecular biology of membrane proteins. Salary \$18,000 to \$24,000. Send résumé and three references to: **Dr. O. P. Bahl, Department of Biological Sciences, SUNY, Cooke Hall, Buffalo, NY 14260**. *SUNY is an Affirmative Action/Equal Opportunity Employer*.

RESEARCH INDIVIDUAL for Department of Anesthesiology. Must have doctorate in physiology or pharmacology. Experience related to anesthesia research preferred. Midwest college town. Contact: **G. W. N. Eggers, Jr., M.D., Professor and Chairman, Department of Anesthesiology, University of Missouri Health Sciences Center, Columbia, MO 65212**.

RESEARCH SCIENTIST—Ph.D. (chemistry, biochemistry, or pharmacology) sought to organize and operate the biochemical and pharmacological laboratory of the Department of Anesthesiology. Highly collaborative individual needed with good supervisory skills. Knowledge of and experience with assays for muscle relaxants, narcotics, hormones (especially catecholamines), substrates and nitrogen balance. Experience with HPLC, TLC, GC, and RIA. Candidate's area of research and publications would be in pharmacokinetic, pharmacodynamics or muscle relaxants and narcotics, substrates and hormonal responses to surgical stress and related areas. Apply with curriculum vitae to: **Dr. Richard Matteo, Department of Anesthesiology, Columbia University College of Physicians and Surgeons, P & S Box 46, New York, NY 10032**.

RESEARCH SCIENTIST/ELECTRON MICRO-PROBE. Department of Mineral Sciences, American Museum of Natural History invites applications for a Curatorial Fellow. Responsibilities include research using as a primary tool the Department's nine-channel (+EDS) SEMQ, the day-to-day operation and maintenance of the instrument (with the help of a service contract), the instruction of users and looking to the long-term development of the laboratory. The applicant is expected to have substantial research experience with the electron probe and be willing to develop joint projects with members of the Department and local geologic community. Ph.D. in mineralogy, petrology or a materials science-related field is required at time of appointment. The position, fully funded by the Museum, is non-tenured and is immediately available.

The Department consists of four curators, one postdoctoral fellow and several graduate students representing the fields of mineralogy, petrology, volcanology, meteoritics, and economic geology. Close ties are maintained with Lamont-Doherty Geological Observatory both at the staff level and through Museum-supported fellowships for graduate students. The Department maintains single-crystal and powder x-ray diffractometers, petrographic microscopes, heating-freezing stage, thin section and polishing equipment and a chemistry lab and has one of the largest mineral and meteorite collections in North America.

Send curriculum vitae and names of three references by 15 May 1988 to: **Dr. Edmond A. Mathez, Assistant Curator, Department of Mineral Sciences (S), American Museum of Natural History, 79th Street at Central Park West, New York, NY 10024**. *An Equal Opportunity Employer*.

POSITIONS OPEN

RESEARCH ASSOCIATE in reproductive endocrinology: Immediate opening available for a Ph.D. scientist to work in a multidisciplinary group investigating molecular mechanism(s) of gonadotropin and androgen action in reproductive tissues. Some previous experience in subcellular fractionation, organelle purification, enzyme assays, RNA synthesis, extraction and hybridization are required. Minimum salary, \$17,000 per year. If interested contact: **Dr. Ch.V. Rao, Department of Obstetrics/Gynecology, 438 MDR Building, University of Louisville, Louisville, KY 40292**, with curriculum vitae and arrange to send three letters of recommendation.

SCIENTISTS

Matritech Inc., a recently formed biotechnology company based in the Boston, Massachusetts, area, has positions available for Scientists to develop innovative products based on molecular cell biology. Candidates should have a Ph.D. and a further 3 to 6 years of experience in biochemistry, immunochromatography, or molecular biology, preferably in the area of oncology. Experience in managing other scientists and technicians in an industrial environment would be an asset.

Significant opportunities exist for individuals to make a major contribution to this start-up venture and be rewarded accordingly. *Matritech is an Equal Opportunity Employer*. Send résumé to: **Dr. Graham P. Lidgard, Matritech Inc., P.O. Box 895, Cambridge, MA 02142**.

The Environmental Defense Fund is seeking applicants for the position of **STAFF SCIENTIST** in its New York City office. Applicants must have a graduate degree in the area of the physical or biological sciences relevant to the environment or in an applied science such as energy studies. Research experience and good writing skills required. The position provides the opportunity to undertake scientific research and apply the results to public policy issues.

Please send résumé to:

**Georgia Pease
Environmental Defense Fund
257 Park Avenue South, 16th floor
New York, NY 10010**

The Department of Organismic and Evolutionary Biology of Harvard University invites application for a **TENURED POSITION** in the field of molecular plant systematics. Starting date to be negotiated. Applicants should have demonstrated excellence in research and a strong commitment to teaching at the graduate and undergraduate levels. The closing date for applications is 25 April 1988. Please send curriculum vitae, statement of research interests, and three letters of recommendation to: **P. F. Stevens, Harvard University Herbaria, 22 Divinity Avenue, Cambridge, MA 02138**. *Harvard University is an Affirmative Action/Equal Opportunity Employer*.

TOXICOLOGIST—PUBLIC INTEREST

Position with a national consumer advocacy organization. Evaluate research on food additives, pesticides, and bacteria; help prepare regulatory petitions; advise consumers and journalists. Advanced degree, writing skills, and interest in consumer advocacy required. Salary: \$30,000 to \$40,000. Résumé, popular writing sample, and salary history to: **Center for Science in the Public Interest-DB, 1501 16th Street, NW, Washington, DC 20036**.

VIROLOGIST

We're a major producer of viral diagnostic products located in suburban Washington, D.C. Our expanding activities create a challenging opportunity for an individual with a Ph.D. in virology, cell biology, immunology or equivalent. Requires 2 to 4 years of industrial experience in production troubleshooting, and immunoassay development. Competitive salary and benefits. Please forward résumé with availability, salary history, and requirements to:

**Personnel Department—AS
Biotech Research Laboratories, Inc.
1600 East Gude Drive
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Equal Opportunity/Affirmative Action Employer

Research Professionals

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

Scientist Protein Purification & Characterization

We are seeking a highly motivated and innovative Scientist with experience in the purification and characterization of proteins. This Scientist will join a multi-disciplinary team of biochemists and biochemical engineers developing methods to purify and characterize recombinant proteins to be used as human pharmaceuticals. The individual will focus on rapid protein purification and characterization in conjunction with research.

The successful candidate will have a Ph.D. in Biochemistry with at least 2 years' postgraduate experience in either academia or industry with a demonstrated record of accomplishment. Knowledge of HPLC, FPLC, affinity and other protein purification/analysis techniques is essential.

Research Assistant/Associate

We are also seeking a Research Assistant/Associate to work on cDNA cloning and the expression/functional analysis of polypeptides. You will also be involved in membrane signal transduction. This opportunity requires a BS/MS in Molecular Biology, Cell Biology or equivalent with at least 2 years' experience in molecular cloning techniques. Cell culture experience is desirable.

Genentech, Inc. offers an excellent salary and benefits package coupled with the opportunity to make a significant contribution to our organization. For the Scientist position, please send resume to: Joyce Goulden, Human Resources Dept. 0642, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. For the Assistant/Associate position, please send resume to Eric Mankuta, Human Resources Dept. 1413 at the same address. An equal opportunity employer.

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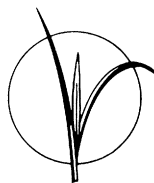
Senior Scientist/ Research Assistants

Crop Genetics International, a growing agricultural biotechnology company in suburban Baltimore/Washington, has openings in their microbial insecticide division. The scientists will be part of a multi-disciplinary team developing novel microbial technologies for "in planta" production of agricultural biochemicals.

SENIOR SCIENTIST requirements are a Ph.D. in Bacterial Physiology/Genetics or Biochemistry with experience in the regulation of gene expression using recombinant DNA technology. Training and/or experience in protein structure/function is desirable.

RESEARCH ASSISTANT requirements are a BS or MS in the biological or chemical sciences. Individuals with research experience using recombinant DNA techniques or protein isolation and characterization (including 2-Dimensional gel electrophoresis and western blotting) preferred.

To apply forward a curriculum vitae in confidence and the names of three professional references to:



Dept. M1

Crop Genetics International

7170 Standard Drive
Hanover, MD 21076

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PROTEIN CHEMIST

The Worcester Foundation is seeking an experienced protein chemist to be the primary operator of a Protein Chemistry Facility now being established. This core facility will be equipped to provide protein sequencing, peptide synthesis, amino acid analysis and peptide mapping services to our faculty. The position offers the opportunity to contribute to a diverse set of projects studying protein structure and function, including cytoskeletal proteins, receptors, signal transduction proteins, mammalian pheromones and several enzyme systems and proteins found in the nervous and male reproductive systems. Applicants should have extensive protein chemistry experience and some familiarity with a gas-phase sequencer and peptide synthesizer. Salary and level of appointment of this non-faculty position will be commensurate with experience. The Worcester Foundation is a non-profit, basic research institute located on a 100 acre wooded campus 40 miles west of Boston. Send curriculum vitae, a statement of career objective and three letters of reference to **Protein Chemist, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545 USA.**

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DNA Probes Diagnostics and Therapeutics

MicroProbe, a DNA-probe company having strong emphasis on nucleic acid chemistry, has immediate openings for Senior Scientists and Research Associates in:

Molecular Biology: Cloning, sequencing, DNA hybridization and non-isotopic signal development.

Chemistry: Synthetic organic chemistry related to nucleic acids, bio-organic or medicinal chemistry.

Product Development: Assay design and optimization for viral and microbial diagnostic products.

Senior Scientists will have a Ph.D. plus post-doctoral training. Research Associates will have a B.S. with research experience or an M.S..

MicroProbe is located in suburban Seattle and offers a stimulating research & development environment, a competitive salary and benefits package, plus an equity position.

Submit resume in confidence to:

MicroProbe Corporation
1725 220th Street SE, No. 104
Bothell, WA 98021



Chairperson Department of Food Science

The University of Delaware is seeking a dynamic scholar who will provide leadership in building research and academic strength in its Department of Food Science, College of Human Resources. The Department is young, multidisciplinary, and with the infusion of additional human and financial resources, has the potential for national prominence. Their ideal geographic location has resulted in collaborative arrangements with the many food and chemical companies and research agencies in the region: there is strong potential for further expansion. Earned doctorate in food science or closely related field, demonstrated achievement in basic and applied research, and research grant administration and teaching. Demonstrated effective management and communication skills. Applications and/or nominations including the names of 3 references should be forwarded by **June 1, 1988** to: **Dr. Norman E. Collins, Chairperson, Search Committee, 058 Townsend Hall, University of Delaware, Newark, DE 19717-1303.**

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

NATIONWIDE OPENINGS PHARMACEUTICAL R & D

Associate Director Regulatory Affairs IND's, NDA's FDA experience, Ph.D. Pref. Phase I-IV experience 5-10 years 70K + Bonus

Manager-Compliance 2 positions in GMP/GLP, Ethical Drugs, GCP. 40K + Bonus

Director of Manufacturing/Packaging, Solid Dosage and Liquids, B.S., M.S., Phar. + MBA 85K + Bonus

Toxicokineticist Ph.D. 45K +

CRA's - RN, MS, Ph.D., Various levels 30-50K

Solid Dosage Form Development, Sr. Scientist—Ph.D. Pharm. 2 + years 40-50K

Bio-Technology—DNA R & D, Bench to Group Leader. Cell and Molecular Biology. Ph.D. only. 50K + Bonus

Drug Delivery Development, 0-5 years, Ph.D., Industrial Experience or Post-Doc. Protein/Small Molecule Background. . . . 45K +

Product Manager (Prelaunch Experience) New Pharmaceutical Products (Cardiovascular) 50K + Bonus

Market Manager Sales oriented, Forecasting and Projections, create sales aids for products to HMO and Hospitals. 50K + Bonus

Employer paid fee— call or write:
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RESEARCH SCIENTISTS

Athena Neurosciences, Inc., located in the San Francisco Bay Area, is a biotechnology-based company committed to the discovery and development of new products to diagnose and treat diseases of the nervous system. Our research focuses on Alzheimer's disease and the delivery of drugs to the brain. The following scientific positions are currently available:

Pharmacologist—A position is available at the Ph.D. level for a pharmacologist with proven experience in drug development to aggressively direct preclinical studies on several promising lead compounds. Responsibilities will include directing the pharmacology/physiology unit and participating as an integral member of the drug discovery/modification team. The optimal candidate will be a neuropharmacologist with two to four years of experience in the pharmaceutical industry.

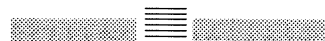
Enzymologist—One position is available at the Ph.D. level for an individual with proven experience in protease enzymology and with interest in both protein purification and enzyme kinetics.

Molecular Biologist—One individual is sought at the M.S./B.S. level who is experienced in DNA sequencing, cDNA/genomic cloning and/or mammalian cell expression.

Athena Neurosciences is committed to scientific excellence and offers an exciting professional environment in addition to competitive salaries, benefits and equity participation. Please send curriculum vitae to: Athena Neurosciences, Inc., 957-P Industrial Road, San Carlos, CA 94070.
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ATHENA

Athena Neurosciences, Inc.



Manager Bioanalytical Chemistries

Molecular Devices Corporation has developed a highly-sensitive, novel silicon-based chemical sensor, which can provide on-site analysis and will be used for innovative applications in bioanalysis.

We are seeking a strong technical leader to direct the development of new bioanalytical chemistries from concept through to feasibility. Qualified candidates must have a PhD in Chemistry or Biochemistry, and 5 years' technical experience in R&D within the biotech or diagnostic industry.

To find out more, see our description of sensor technology in *Nature*, Vol. 329, page 565, or send your resume to Molecular Devices Corporation, 3180 Porter Drive, Palo Alto, CA 94304. EOE.



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NATIONAL INSTITUTE OF
NEUROLOGICAL AND
COMMUNICATIVE
DISORDERS AND STROKE
Staff/Senior Staff
Fellowship**

The Surgical Neurology Branch (SNB), Division of Intramural Research (DIR), National Institute of Neurological and Communicative Disorders and Stroke (NINCDS), National Institutes of Health (NIH), Public Health Service (PHS), announces a Staff Fellowship opening. This postdoctoral tenure-track fellowship is available to study the cell biology, endocrinology or molecular biology of the pituitary gland and pituitary tumors. The appointee will be expected to initiate independent research. SNB seeks a scientist who can relate laboratory efforts to clinical pituitary problems and who is eager to interact with an active pituitary surgery program.

For the NIH Staff Fellowship Program, candidates must be U.S. citizens or resident aliens within four (4) years of receiving U.S. citizenship, and must either have been awarded their doctoral degree in fields closely related to the position, or have been certified by a university as meeting all the requirements leading to such a doctorate. Candidates with less than 3 years of professional level postdoctoral research experience may be considered for entrance into the program as Staff Fellows (SF). Senior Staff Fellowships (SSF) may be considered for those having 3 to 7 years of professional level post-doctoral research experience. The salary ranges for the SF Program are \$20,000pa (PhD's)/\$24,688pa (MD's) to \$35,491pa (PhD's)/\$37,997pa (MD's). The salary ranges for the SSF Program are \$24,000pa (PhD's)/\$28,000pa (MD's) to \$42,600pa (PhD's)/\$49,266pa (MD's). Starting salary is commensurate with experience. The initial appointment is for two (2) years with additional extensions of up to five (5) years possible, for a total of seven (7) years in the program.

Further position information and qualifications requirements may be obtained by calling Clifford Schein on (301) 496-6334. The position is located in Bethesda, Maryland. Interested candidates should send a curriculum vitae, a brief statement of research interests and the names of three (3) references to:

Dr. Edward H. Oldfield
Chief, Surgical Neurology Branch
DIR, NINCDS
Building 10, Room 5D37
National Institutes of Health
9000 Rockville Pike
Bethesda, MD 20892
Telephone: (301) 496-5728

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

Opportunities for PhDs in **CARDIOVASCULAR RESEARCH**

- **Cardiovascular Pharmacologist**
- **Biochemical Pharmacologist**

We're Ortho Pharmaceutical Corporation, part of Johnson & Johnson, the most broadly based health care company in the world.

We have 2 immediate openings in our Division of Pharmacology for a biochemical pharmacologist and a cardiovascular pharmacologist. The biochemical pharmacologist will have a solid foundation in cardiovascular pharmacology and demonstrated capabilities in studying drug action at the biochemical/molecular level using radioreceptor, radioimmunoassay, enzymological and cell culture techniques. The cardiovascular pharmacologist will have a strong background in the measurement of hemodynamic parameters in whole animals, develop models of ischemia and infarction and possess the ability to assess regional myocardial blood flow distribution.

These individuals, with approximately 2-5 years of postdoctoral experience, will be part of a multi-disciplinary team targeted to the discovery of drugs for the treatment of a variety of cardiovascular disorders including myocardial infarction and coronary artery disease. These senior scientists will be expected to:

- participate actively in our ongoing drug discovery efforts;
- establish an independent drug discovery program;
- interact with scientists in a variety of disciplines including medicinal chemistry;
- conduct drug evaluation studies and participate in the decision-making process of recommending compounds for development; and
- possess excellent oral and written communication skills.

In addition to a fully competitive compensation and benefits program, we offer a stimulating environment in which to grow and be recognized accordingly. If you are willing to accept the challenge and meet the above qualifications, please send your resume including salary history and requirements, to: Mr. Frank Folio, Dept. 19, Ortho Pharmaceutical Corporation, P.O. Box 300, Raritan, NJ 08869-0602.

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COURSE

OXYGEN RADICALS Aspen, Colorado 16 to 20 August 1988

Sixth in a series of scientific updates integrating important aspects of basic and clinical sciences. A concentrated review and discussion of the contribution of oxidants to various diseases. Emphasis on recently discovered mechanisms involved in lung injury and ischemia-reperfusion disorders afflicting heart, kidney and other organs. Of interest to basic and clinical scientists. Casual dress. Inquiries to: **Dr. John Repine**, 303-270-8633, or to: **Office of Continuing Education, University of Colorado School of Medicine**, 4200 East 9th Avenue, Denver, CO 80262. Telephone: 303-270-5195.

GRADUATE TRAINING

GRADUATE TRAINING IN NEUROSCIENCE

The Department of Physiology and Biophysics at Hahnemann University has graduate stipends available to support students pursuing a Ph.D. degree in physiology beginning in September 1988.

The department has particular research strengths in neurophysiology, neuropharmacology, and neuroanatomy. Specific areas include: extrahypothalamic actions of sex steroids (**Sheryl S. Smith**), basal ganglia function (**Jay Schneider**), cerebral cortex function, neural network simulations and alcohol (**John K. Chapin**), and central monoamine systems, epilepsy and drugs of abuse (**Barry D. Waterhouse**).

The program is open to students with a B.S. or M.D. degree. Further information and application forms are available from: **Dr. Joseph Torres, Department of Physiology and Biophysics, M.S. 409, Hahnemann University, Broad and Vine, Philadelphia, PA 19102-1192. Affirmative Action Employer.**

WORKSHOPS

WORKSHOP ON CONTROL OF CELL PROLIFERATION IN SENESCENT CELLS 12 to 13 August 1988 Montreal, Quebec, Canada

ORGANIZERS: Huber Warner (NIA/NIH, Bethesda, Maryland)

**Eugenia Wang (The Bloomfield Centre for
Research in Aging, LDI/JGH/McGill
University, Montreal, Canada)**

The workshop is a satellite meeting of the Fourth International Congress of Cell Biology, Montreal, Canada. The meeting will focus on the interactions among major areas of interest in studying what and how the molecular mechanisms operate to terminate cell proliferation at the end of cells' in vitro life span. The workshop will feature invited lectures, plenary roundtable discussions and poster presentations. Interchange among attendees is anticipated to lead to new approaches for research in the biological sciences of cellular aging.

Applications: The deadline for application is 15 June 1988. The total number of participants will be limited to 100. The registration fee for regular participants is US\$50, and US\$25 for students (make check payable to The Bloomfield Centre for Research in Aging). The registration fee covers the lunches and the workshop reception but does not cover the cost of accommodation nor the daily transport to and from the meeting site. For registration forms and other information, contact: **Dr. Huber Warner, Building 31C, Room 5C21, NIA, NIH, Bethesda, MD 20895. Telephone: 301-496-6402.**

For further information, contact: **Dr. Huber Warner, Telephone: 301-496-6402 or Dr. Eugenia Wang, Telephone: 514-340-8260.**

Funded by: National Institute on Aging, NIH, and The Bloomfield Centre for Research in Aging/Lady Davis Institute/JGH/McGill University.

TRAINING PROGRAM

POSTDOCTORAL FELLOWSHIP MENTAL RETARDATION AND DEVELOPMENTAL DISORDERS

An immediate opening is available at the Eunice Kennedy Shriver Center for a Ph.D. or M.D. in an interdisciplinary neuroscience training program supported by NICHD. Training is particularly directed to areas of research relevant to the biological basis, treatment, and prevention of mental retardation and other developmental disorders. The program emphasizes developmental neurobiology and its clinical relevance and includes the areas of neurochemistry, neurogenetics, and cell biology. Specific areas of interest include cell surface glycoconjugates (**McCluer, Jungalwala, Schwarting, Yamamoto**), molecular neurogenetics (**Breakefield**), the role of lysosomes in cellular dynamics (**Kolodny**), myelin structure and function (**Lees, Jungalwala**), molecular biology of brain cytoskeleton (**Fischer**) and neuroendocrinology and sexual differentiation (**Fox**). The Center is located in suburban Boston and has affiliations with Massachusetts General Hospital and Harvard Medical School. U.S. citizenship or permanent residence required. For further information contact: **Dr. Marjorie Lees, E. K. Shriver Center, Biochemistry Department, 200 Trapelo Road, Waltham, MA 02254. Telephone: 617-642-0129.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS available in neurobiological and behavioral development. The University of Virginia announces a new NICHD multidisciplinary program.

Nicholas J. Lenn, M.D., Ph.D.	Synaptic Development (Program Director)
Oswald Steward, Ph.D.	Neuroplasticity (Co-Director)
James Bennett, M.D., Ph.D.	Neuropharmacology
Bennett Bertenthal, Ph.D.	Vision Development
Peter Brunjes, Ph.D.	Sensory Development
Paul Gold, Ph.D.	Neuroendocrine Regulation of Memory
Irving Gottesman, Ph.D.	Genetic Mental Illness
John Hackett, Ph.D.	Synaptic Transmission
David Hill, Ph.D.	Sensory Development
William Levy, Ph.D.	Synaptic Modification
Eric Lothman, M.D., Ph.D.	Physiology of Epilepsy
Richard McCarthy, Ph.D.	Autonomic Development
DeForest Mellon, Jr., Ph.D.	Neuromuscular Development
Sally Moody, Ph.D.	Neuronal and Axonal Development
Lionel Rebhun, Ph.D.	Cytoskeletal Development
Emilie Rissman, Ph.D.	Behavioral Endocrinology
Sandra Scarr, Ph.D.	Developmental Psychology
Jeremy Tuttle, Ph.D.	Tropic Interactions
G. Frederick Wooten, M.D.	Neuropharmacology

Candidates should have a Ph.D. or M.D. degree. United States citizenship or permanent residency required. Please send curriculum vitae, a one-page description of research interests, and a list of three referees to one or more preceptor and a copy to the program director: **Box 290, University of Virginia, Charlottesville, VA 22908.**

SCIENCE FELLOWSHIPS: Applications being accepted for full-time (6- to 12-month) Science Fellowships in Medical Science and Technology. Unique opportunity for study and writing in areas of: Adolescent Health, AIDS, Drug and Alcohol Abuse, Biomedical Research, Pharmaceutical Development, Nutrition and Personal Health, Medical Nomenclature, Technology Assessment, Science Education and Mental Health. Must have research experience, documented writing skill and the ability to work independently. Prorated stipend of \$30,000 per year. Please send curriculum vitae and non-returnable samples of first-authored article(s) to: **Science Fellowships—001-HEE, American Medical Association, 535 North Dearborn Street, Chicago, IL 60610.**

FELLOWSHIPS

FELLOWSHIPS IN REPRODUCTIVE BIOLOGY NORTHWESTERN UNIVERSITY

Postdoctoral and predoctoral fellowships are available in reproductive biology for outstanding students. A diverse but cohesive program offers research in the biochemical, cellular, physiological, and behavioral aspects of reproduction. Participating faculty include: **Erwin Goldberg** (Immunochimistry and reproductive biochemistry); **Mary Hunzicker-Dunn** (Ovarian protein kinase; adenyl cyclase); **William Klein** (Receptors; CNS differentiation); **Jon Levine** (Neuroendocrinology); **Kelly Mayo** (Gene regulation in the mammalian neuroendocrine system); **Neena Schwartz** (Gonadotropin endocrinology); **Joseph Takahashi** (Circadian rhythms and photoreception); and **Fred Turek** (Photoperiodism and biological rhythms). Send curriculum vitae and names of three references to: **Dr. Neena B. Schwartz, Department of Neurobiology and Physiology, Northwestern University, 2153 Sheridan Road, Evanston, IL 60201.**

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POSTDOCTORAL FELLOWSHIP POSITION

Position available immediately for biophysical studies of membrane fusion mechanisms and membrane permeabilization. Background in freeze-fracture electron microscopy, membrane isolation, conjugation of fluorescent markers to carrier probes, membrane biochemistry, electrophysiology helpful. Send curriculum vitae and list of references to:

**Dr. Arthur E. Sowers
Position G119
American Red Cross Laboratories
15601 Crabbs Branch Way
Rockville, MD 20855**

An Equal Opportunity Employer M/F/V/H

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
Yale University is an Affirmative Action/
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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).

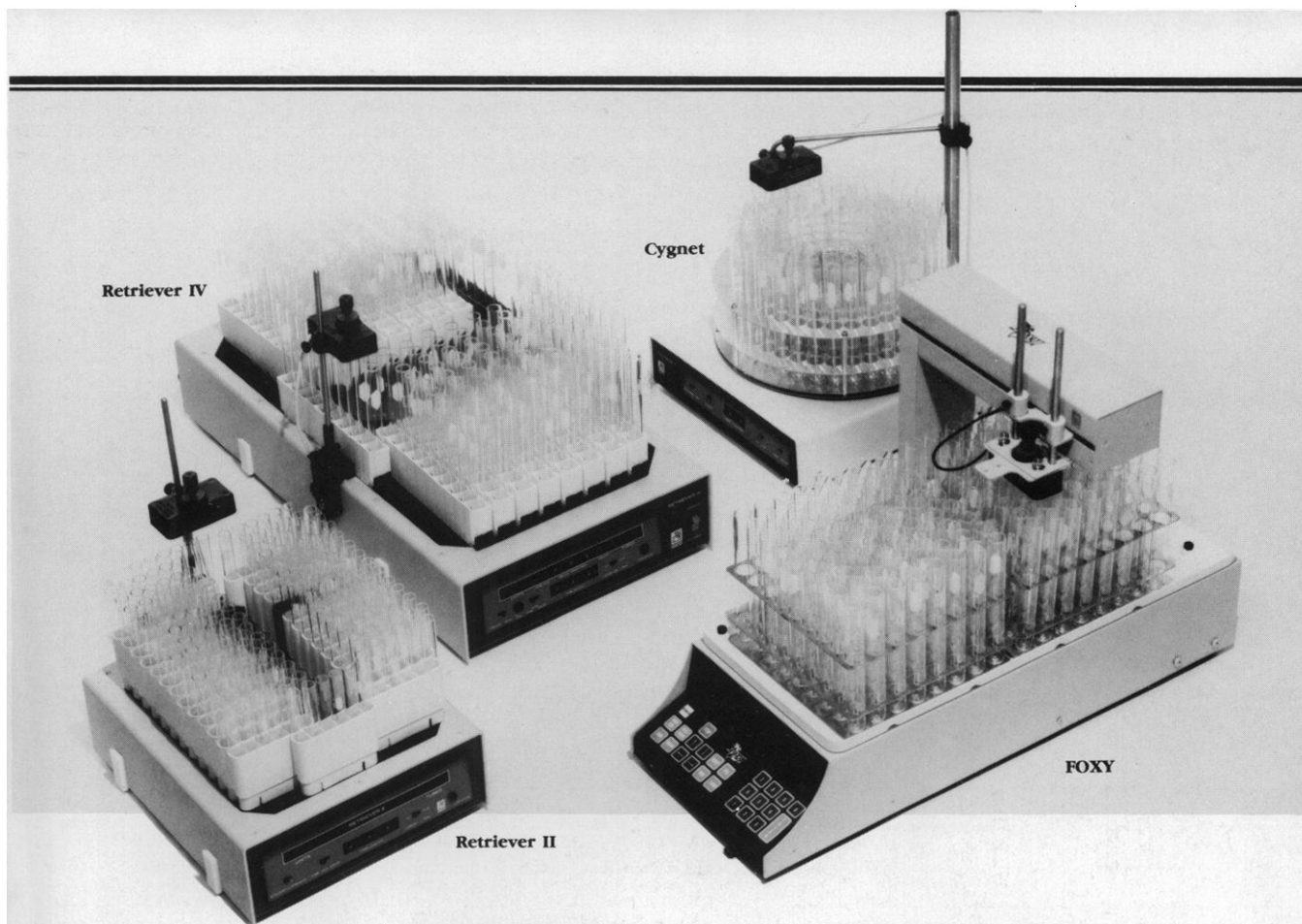
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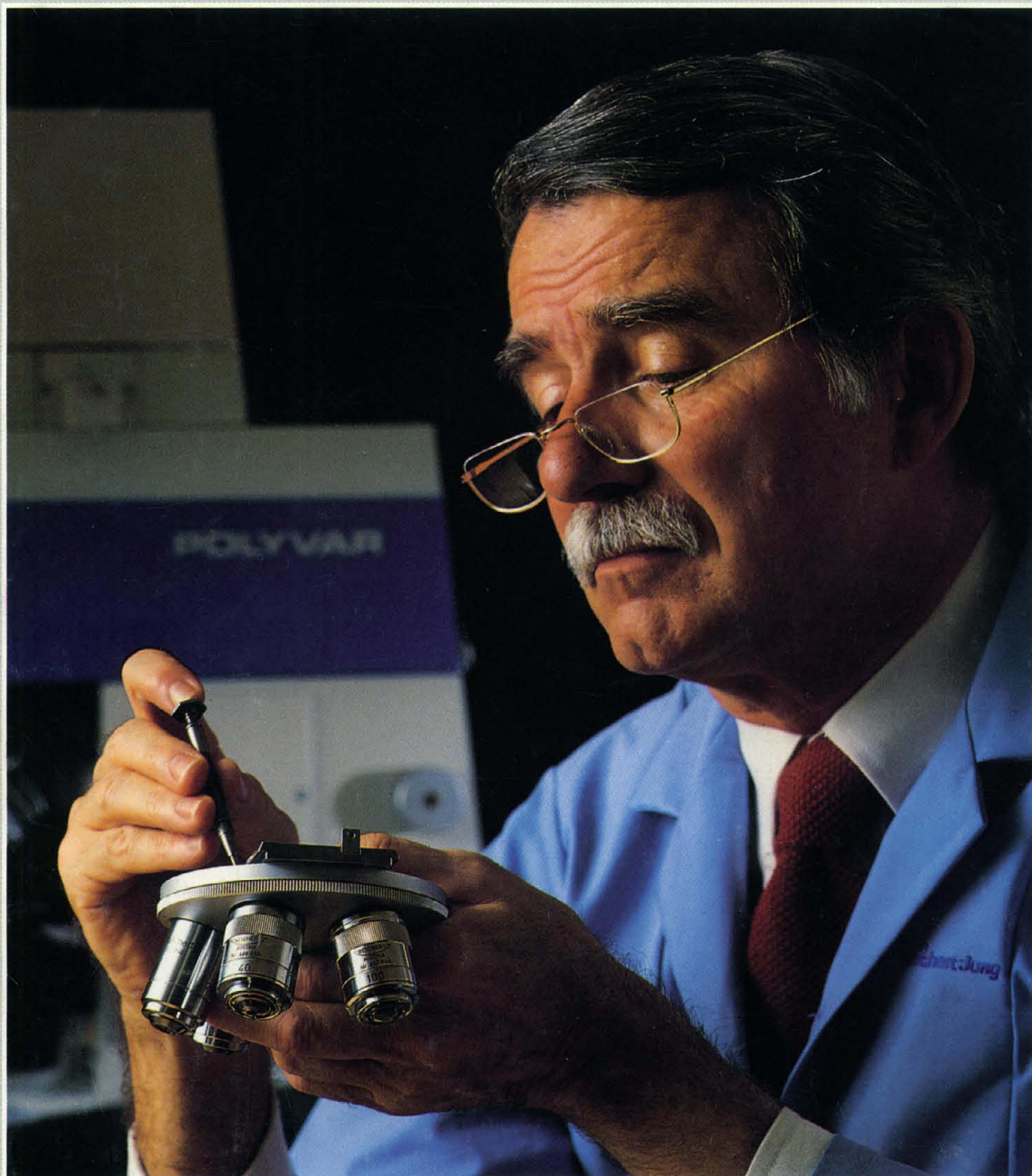
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