

and enumerates future observatories that will facilitate multiwavelength work. I found the first two chapters particularly interesting in that they constitute a primer for conducting multiwavelength research. An infrared or submillimeter astronomer must find the third chapter disappointing because the author discusses only one infrared mission, SIRTf, and omits the European Space Agency's Infrared Space Observatory (ISO), scheduled for launch in 1993, and the planned NASA mission LDR and ESA mission FIRST.

Many of the papers in this volume provide outstanding examples of how an astrophysical picture emerges from a wealth of individually inconclusive indicators, intelligently gathered wherever technology provides opportunities and physical insight permits discrimination between competing ideas. Perhaps the most useful aspect of the book is that it tells the newcomer how to think in terms of multiwavelength observations. We don't find many tables compiling facts. Rather, we repeatedly become engrossed in discussions of how to derive astrophysically interesting conclusions. In the long run that may be the most valuable contribution this volume can make.

MARTIN HARWIT

*Laboratory for Astrophysics,
National Air and Space Museum,
Washington, DC 20560*

A Biotic Transition

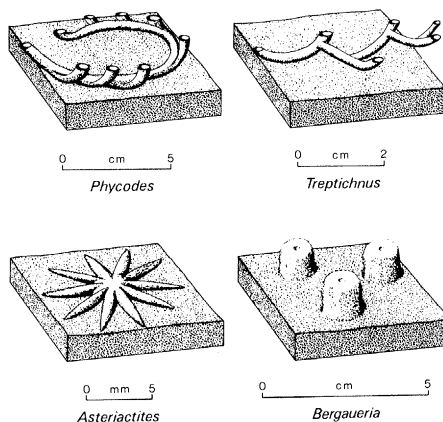
The Precambrian-Cambrian Boundary. J. W. COWIE and M. D. BRASIER, Eds. Clarendon (Oxford University Press), New York, 1989. x, 213 pp., illus. \$85. Oxford Monographs on Geology and Geophysics, vol. 12.

The most important events in the history of life arguably occurred during the few tens of millions of years that encompass the transition from Precambrian to Cambrian time. It was then that the body plans of most of the major groups of animals were developed during a period of unparalleled evolutionary invention; those metazoan diversifications cast the parts for the great play of life.

Despite the clear intrinsic interest of those seminal events, it has only been within the last couple of decades that a broad scientific effort has been mounted to explore the geologic and paleontologic record of that time; reasonably complete sections across the transition are rare, trace fossil studies had been in their infancy, and body fossils are relatively rare and are so primitive or allied so remotely to living groups that their interpretation is difficult. Furthermore, the temporal relations of fossil occurrences are

uncertain. Fortunately, progress in studies of transition events has been accelerating steadily. One of the principal driving forces has been, of all things, the attempt to establish international agreement on a reference horizon and locale (a "Global Stratotype Section and Point"—GSSP) for the Precambrian-Cambrian boundary. This effort has led to the careful examination of a number of sections that embrace the boundary, with an eye to discovering the most complete, most fossiliferous, and generally most useful GSSP. From these (and to be sure many other) studies has come a flood of new information bearing on the early metazoan radiation.

The Precambrian-Cambrian Boundary is a collection of essay-reviews, rich in data, written by several British members of a Working Group established under the International Geological Correlation Programme to recommend a GSSP. At present there are three major candidate sections: one is in Yunnan Province, one in Siberia, and one in Newfoundland. These and other important sections are described in some detail in a series of chapters. The biostratigraphy of the earliest fossils with mineralized skeletons, which appear near the boundary (more cannot be said until the boundary is selected), is reviewed on a global scale, as is the sequence of trace fossils from their earliest appearance through the Lower Cambrian. These two groups of fossils are promising as stratigraphic tools, although they lead to slightly different results when used to correlate geologic formations. The most serious deficiency is in the coverage of the biostratigraphic record of the phytoplanktonic acritarchs, which may prove to be especially useful in Precambrian-Cambrian correlations. There is reason to hope that these three fossil groups will provide the correlations needed to certify the sequence of events during the transition.



"Some of the trace fossils which first appear before the earliest trilobites in Tommotian and Atdabanian strata." [From T. P. Crimes, "Trace fossils," in *The Precambrian-Cambrian Boundary*]

Two papers consider the absolute ages of the rocks near the boundary. These discussions are sobering. By convention the boundary age is usually taken as 570 million years. The possible age, however, for the base of the Tommotian Stage, the horizon most likely to be chosen as the boundary, ranges at least from 600 to 530 million years. Recent evidence tends to favor an age nearer the younger end of this large range, but clearly the issue is not decided.

This volume brings together a wealth of biostratigraphic and chronostratigraphic information. For readers with a good working knowledge of the principles of biostratigraphy and a reason to inquire into the nature of the stratigraphic record during the early metazoan radiations, access to this volume is indispensable.

JAMES W. VALENTINE

*Department of Geological Sciences,
University of California,
Santa Barbara, CA 93106*

Reprints of Books Previously Reviewed

Pyroclastic Rocks. R. V. Fisher and H.-U. Schminke. Springer-Verlag, New York, 1989. Paper, \$65. Reviewed 227, 48 (1985).

The Strategy of Life. Teleology and Mechanics in Nineteenth-Century German Biology. Timothy Lenoir. University of Chicago Press, Chicago, 1989. Paper, \$14.95. Reviewed 221, 146 (1983).

The Visible College. A Collective Biography of British Scientists and Socialists of the 1930s. Gary Werskey. Free Association Books, London, 1988 (U.S. distributor, Columbia University Press, New York). \$60. Reviewed 206, 674 (1979).

Books Received

Advanced Information Technology in the New Industrial Society. The Kingston Seminars. Arthur Cotterell, Ed. Oxford University Press, New York, 1988. xiv, 113 pp., illus. \$29.95; paper, \$18.95.

Advanced Power Sources for Space Missions. National Research Council. National Academy Press, Washington, DC, 1989. xii, 140 pp. Paper, \$23.50.

The Biology of the Brain. From Neurons to Networks. Rodolfo R. Llinás, Ed. Freeman, New York, 1989. xii, 170 pp., illus. Paper, \$10.95. Readings from *Scientific American*.

The Challenge of Global Warming. Dean Edwin Abrahamson, Ed. Island Press, Washington, DC, 1989. xviii, 356 pp. \$34.95; paper, \$19.95.

The Facts on File Dictionary of Artificial Intelligence. Raoul Smith. Facts on File, New York, 1989. viii, 211 pp., illus. \$24.95.

The Geology of Iztaccihuatl Volcano and Adjacent Areas of the Sierra Nevada and Valley of Mexico. Graham T. Nixon. Geological Society of America, Boulder, CO, 1989. viii, 58 pp., illus., + map in pocket. Paper, \$20. GSA Special Paper 219.

Low Temperature Detectors for Neutrinos and Dark Matter II. L. Gonzales-Mestres and D. Perret-Gallix, Eds. Editions Frontières, Gif sur Yvette, France, 1988. x, 518 pp., illus. \$63. From a workshop, Annecy-Le-Vieux, France, May 1988.

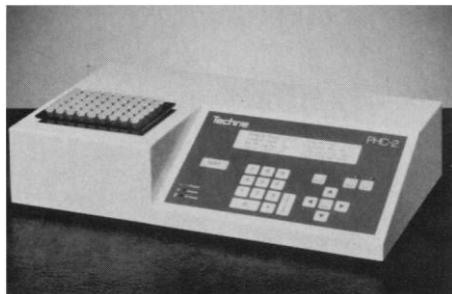
Macroevolutionary Dynamics. Species, Niches, and Adaptive Peaks. Niles Eldredge. McGraw-Hill, New York, 1989. xii, 226 pp., illus. \$28.95; paper, \$14.95.

The Oblique Derivative Problem of Potential Theory. A. I. Yanushauskas. Consultants Bureau (Plenum), New York, 1989. viii, 251 pp. \$79.50. Contemporary Soviet Mathematics. Translated from the Russian by Norman Stein.

Products & Materials

Programmable Heating-Cooling Dry Block

Model PHC-2 is a dry heating and cooling bath with temperature programming. A keyboard and liquid crystal display panel provide a means for input of the tempera-



ture program and for the display of the operation of the instrument. It provides faster heat-up and cool-down than an earlier model and greater programmability. Techne. Circle 566.

Automated Electrophoresis Applicator

The SUREspot automatic applicator measures and simultaneously dispenses up to 17 samples to agarose gels for electrophoresis. It eliminates hand-pipetting and the



variability resulting from absorption times and evaporation when samples are applied one at a time. It provides a step between conventional electrophoresis and fully automated systems. Helena Laboratories. Circle 573.

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

Low-Light Imaging System

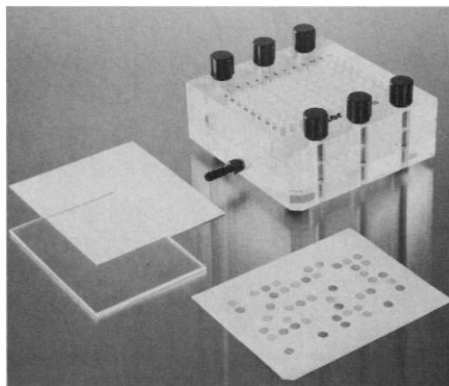
The Astromed CCD 2200 is an ultralow-light imaging system complete with camera, computer, and image processing software. The CCD 2200 is sensitive to light levels as



low as 1 photon per pixel per minute and can accept light levels as high as 10^9 photons per pixel per second. Performance is enhanced by advanced cooling technology to minimize dark current in the detector. Microscience. Circle 556.

Integrated System for DNA Dot Blot Detection

The Oncor non-isotopic dot blot hybridization system is the only nonradioactive system available for the preparation and detection of dot blot targets on membrane filters. The system consists of the Oncor dot



blot apparatus, non-isotopic hybridization and detection reagents, nylon hybridization membrane, and membrane support pad. The system contains all dyes, enzymes, washing solutions, blocking reagents, and hybridization reagents needed. Oncor. Circle 563.

Video Microscope Systems

The Scopeman is a video microscope combining an advanced charge-coupled device, fiber optic illumination, and optics technologies into a compact and user-friendly package. Two models are available. The MS-501 is portable with a built-in 6-inch monitor, character generator, and super 8-mm VCR. The MS-503 desktop unit includes color filters and a two-way illumination control. Standard magnifications available are $\times 50$, $\times 100$, $\times 200$, and $\times 400$. Moritex U.S.A. Circle 558.

Custom Polyclonal Production

For researchers requiring an antibody not available, Atlantic Antibodies offers a custom immunization service for the production of polyclonal antisera. The company will produce antiserum to a customer's immunogen. INCSTAR. Circle 569.

Literature

Interaction Separations is a new newsletter describing HPLC applications developed on polymeric columns. Published bimonthly, the newsletter is available on request. The latest issue contains articles covering biochemical analysis, food and beverage separations, pharmaceutical determinations, and sample preparation. Interaction Chemicals. Circle 525.

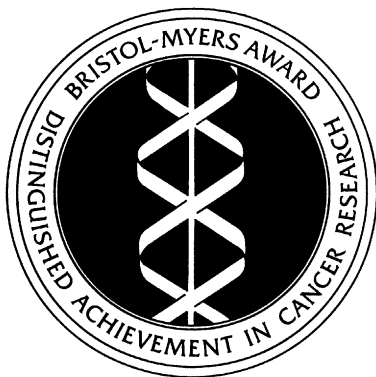
Digital pH and Conductivity Meters is a brochure describing products in this field. Horiba Instruments. Circle 444.

Unending Flow of Current is a reprint of an article on superconductors from *Hoescht High Chem Magazine* No. 6, and *Materials for Superconductor Technology* is a folder containing a range of products. Hoescht. Circle 447.

A new 1989 catalog contains technical data and photographs of many new products including fiber optic flow sensors, digital pressure gauges, a pocket-sized digital balance, and a temperature controller. Controls International. Circle 449.

A full-color, short-form catalog lists test and measurement instruments, including signal sources, digital oscilloscopes, and high-speed waveform digitizers. LeCroy. Circle 526.

Disposable Chromatography is a catalog featuring complete column systems instead of separate items, making it easier to choose the correct chromatography column sizes and the racks and accessories that accompany them. Isolab. Circle 451.



THIRTEENTH ANNUAL BRISTOL-MYERS AWARD FOR DISTINGUISHED ACHIEVEMENT IN CANCER RESEARCH

Bristol-Myers Company presents an annual award to a scientist making an outstanding contribution in cancer research. The candidates for the award are to be nominated by medical schools, free-standing hospitals and cancer research centers.

AWARD: \$50,000 U.S.

Deadline for Receipt of Nominations: December 1, 1989

Announcement of Award Recipient: Spring 1990

SELECTION COMMITTEE

ALAN C. SARTORELLI, PH.D.

*Selection Committee Chairman,
Yale Comprehensive Cancer Center*

ROBERT C. BAST, JR., M.D.

Duke Comprehensive Cancer Center

ROBERT L. COMIS, M.D.

Fox Chase Cancer Center

GEORGE KLEIN, M.D.

The Karolinska Institute

IRWIN H. KRAKOFF, M.D.

University of Texas M. D. Anderson Cancer Center

JOSHUA LEDERBERG, PH.D.

The Rockefeller University

ALBERT H. OWENS, JR., M.D.

The Johns Hopkins University School of Medicine

JOSEPH V. SIMONE, M.D.

St. Jude Children's Research Hospital

RICHARD J. STECKEL, M.D.

Jonsson Comprehensive Cancer Center, UCLA

HARUO SUGANO, M.D.

Japanese Foundation for Cancer Research

E. DONNALL THOMAS, M.D.

Fred Hutchinson Cancer Research Center

JAMES D. WATSON, PH.D.

Cold Spring Harbor Laboratory

Rules and official nomination forms are available from: Secretary, Award Committee, Bristol-Myers Award for Distinguished Achievement in Cancer Research, 345 Park Avenue, Suite 4100, New York, NY 10154, or (212) 546-5709.

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising is accepted only in writing; no abbreviations. Any deadline in ad must be at least 2 weeks after date of issue in which ad appears. Also, personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference. **SCIENCE** reserves the right, in its discretion, to decline to publish advertisements submitted to it.

LINE CLASSIFIED ADVERTISING DEADLINES: Thursday, 10 a.m., 2 weeks prior to issue date (mailed on issue date). For deadlines for display advertising, please contact Scherago Associates.

POSITIONS WANTED: 40¢ per word, plus \$4 for use of box number, per week. \$10 minimum, per week. Prepayment required. This rate is available only to individuals seeking jobs.

LINE CLASSIFIED (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth): \$40.00 per line; \$400 minimum, per week (minimum charge covers one inch on a single column; one inch equals 10 lines of 52 characters and spaces per line). No charge for use of box number. No agency commission for ads less than 4 inches. No cash discount. Prepayment required for all foreign ads. Purchase orders required for all other advertising.

To ESTIMATE ad cost: Structure ad copy on a separate page, on lines of 52 characters and spaces. Include any desired heading. Each line of heading, and/or extra line spaces, and all partial lines (including centered reply information) are counted as full lines. Ad titles located within the text are printed in boldface caps and are only 32 characters per line. In ESTIMATING the cost, multiply total lines x \$40.00 = approximate cost of ad. (This is an approximate cost ONLY. Allow for variation between estimated lines and actual typeset lines and the resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment.)

CANCELLATION POLICY: NOTE: Ad cancellations made after Thursday, TWO weeks prior to issue date incur a 10% production charge. Final deadline for cancellations is 12 p.m. Tuesday, ONE week prior to issue date. Cancellations must be in writing.

Send copy for all **Positions Wanted** ads and **Line Classified** ads less than 1/6 page in size (39 lines) to:

SCIENCE Classified Advertising
1333 H Street, NW, Room 940
Washington, DC 20005
Telephone: 202-326-6555

Send copy for **Fractional Display** ads, 1/6 page and larger, and all **Marketplace** ads to:

Scherago Associates, Inc.
1515 Broadway
New York, NY 10036
Telephone: 212-730-1050

Blind ad replies should be addressed as follows:

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

POSITIONS WANTED

Biophysicist, Molecular Spectroscopist, Ph.D. Extensive research experience in field of lipid-protein interaction and membrane biophysics; professional experience in NMR, ESR, FTIR, UV, DSC, HPLC, electrophoresis, protein chemistry; good publication record, seeking position in industry R&D or sales position in spectroscopy. Box 138, **SCIENCE**.

Food Polymers—Chemist, Ph.D. with successful record of technical problem resolution in applied research, process development (extrusion) and ingredient functionality enhancement with a major consumer products manufacturer. Experienced with ingredient value addition: grain fiber (SDF/TDF), starches, surfactants and stabilizers. Technical manager of citrus by-product utilization program. Delivered novel ingredients and prototypes for clinical studies. Skilled in thermal analysis and NMR methodologies. Seeks opportunity at senior technical level. (No search firms.) Box 124, **SCIENCE**.

POSITIONS WANTED

Chemist, Biochemist, Physiological Sciences, Ph.D., M.D., extensive teaching; clinical and analytic biochemistry, cancer, instrumentation; visible UV, infrared, TLC, GC, electrophoresis, fluorometry; government academic/hospital. Box 354, Rochelle Park, NJ 07662.

Immunologist, M.S. seeks research and development position with biotechnology/pharmaceutical company. Five years of experience in monoclonal antibody production and characterization, immunoassay development, biochemical techniques and in-vivo and in-vitro tumor studies. Laboratory management/teaching background with computer data base/graphical analysis experience. Curriculum vitae and references available upon request. Box 142, **SCIENCE**.

Microbiologist, Ph.D. with postdoctoral experience seeks responsible research/marketing position in established or start-up biotechnology company. Box 125, **SCIENCE**.

POSITIONS OPEN

ANATOMY AND CELL BIOLOGY

A tenure-track position is available at the **ASSISTANT OR ASSOCIATE PROFESSOR** level in the Department of Anatomy and Cell Biology at the University of Virginia. The department stresses research, and candidates are expected to maintain independent programs of investigation. Emphasis is in cellular/molecular, reproductive, and developmental biology. Opportunities for interaction with interdisciplinary programs include neurobiology, development, cancer, and diabetes. Medical school teaching responsibilities are in gross anatomy. Interested persons should send their curriculum vitae and the names of three references to: **Dr. Charles J. Flickinger, Department of Anatomy and Cell Biology, Box 439, University of Virginia Health Sciences Center, Charlottesville, VA 22908.** An Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR

The Department of Veterinary Biomedical Sciences, University of Missouri—Columbia, is accepting applications for a tenure-track assistant professor position with teaching responsibilities in histology-cell morphology. Qualifications include D.V.M. and/or Ph.D. or equivalent, funded research or exceptional potential in biomedical research, and capability to teach microscopic anatomy to graduate and veterinary students. This multidisciplinary department focuses on: circulation research ranging from molecular approaches to intact animal models; endocrinology-reproductive biology; toxicology; and neurosciences. Preference will be placed on expanding the circulation research focus or the reproduction-endocrinology focus, but outstanding applicants in other areas are encouraged to apply. Joint appointment is possible with the Dalton Research Center, a University unit emphasizing cardiovascular research at the molecular, cellular, and systemic level.

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

The University of Missouri is an Equal Opportunity Employer.

University of Maryland at College Park. The Department of Chemistry and Biochemistry invites applications for two tenure-track faculty positions in the general area of biochemistry at the level of **ASSISTANT PROFESSOR**. Exceptional candidates at the senior level will also be considered. One position is to be a joint appointment with the University of Maryland Center for Agricultural Biotechnology. Outstanding candidates in all areas of biochemistry will be considered. Applicants for the joint Agricultural Biotechnology position with research interests in plant and insect biochemistry and molecular biology are encouraged to apply. Applicants should submit curriculum vitae, reprints, a concise statement of research plans and objectives, and arrange for three letters of reference to be sent by 1 November 1989 to: **Professor Richard N. Armstrong, Chairman, Biochemistry Search Committee, Department of Chemistry and Biochemistry, University of Maryland, College Park, MD 20742.**

POSITIONS OPEN

Harvard University: The Department of Psychology anticipates making three and possibly four **ASSISTANT PROFESSOR** appointments (initially for a 5-year term) in any area of psychology, but particularly in personality and social psychology. Applicants with interest and experience in the teaching of introductory psychology will be at an advantage. Applications should include a current curriculum vitae and the names of three referees who are familiar with your work. Please send applications and direct your referees to write directly to: **Jerome Kagan, Chairman, Department of Psychology, Harvard University, 33 Kirkland Street, Cambridge, MA 02138.** The closing date is 1 November 1989. *Applications from women and minorities are especially welcome. Harvard University is an Equal Opportunity Employer.*

ASSISTANT PROFESSOR—BIOLOGICAL OCEANOGRAPHER. The Department of Marine Sciences at the University of Connecticut announces a 9-month, tenure-track assistant professor position in biological oceanography, effective 1 September 1990. The successful candidate is expected to establish a vigorous research program, advise and support graduate students (M.S. and Ph.D.) and teach at the undergraduate and graduate levels. Applicants should have a Ph.D. in oceanography/marine sciences with expertise in coastal, process-oriented water-column research. Send summary of research and teaching interests with curriculum vitae and the names of three references to: **Professor R. B. Whitlatch, Head, Department of Marine Sciences, University of Connecticut, Avery Point Campus, Groton, CT 06340.** Closing date for applications is 1 November 1989. *The University of Connecticut is an Equal Opportunity Employer (Search #0A23).*

HARVARD UNIVERSITY ASSISTANT PROFESSOR CELLULAR AND DEVELOPMENTAL BIOLOGY (CDB)

The Department of Cellular and Developmental Biology intends to make an appointment at the assistant professor level effective September 1991. Our department covers a broad range of topics in cellular biology, developmental biology, neurobiology, and molecular genetics. We are seeking outstanding candidates in any of these fields. We are particularly interested in making an appointment in the areas of:

- vertebrate development
- cell biology (especially protein sorting)
- plant molecular biology.

However, we will consider exceptional applicants in other fields as well. *We strongly encourage applications from women and minority groups.* Applications should include curriculum vitae, reprints of publications, and a statement of present and future research plans. Complete applications and three letters of recommendation, solicited by the applicant, should be received no later than 1 October 1989.

CDB Search Committee
Cellular and Developmental Biology
Harvard University
16 Divinity Avenue
Cambridge, MA 02138
Telephone: 617-495-2327

Harvard University is an Affirmative Action/Equal Opportunity Employer

ASSISTANT PROFESSOR MOLECULAR BIOLOGY

Applicants are invited for a tenure-track position in the area of molecular biology. We are seeking candidates with interests in DNA replication, repair, or gene regulation in mammalian systems, but excellent candidates in other areas of molecular biology will be considered. The applicant will be expected to develop a vigorous, independent research program and be involved in teaching of graduate students. Interested individuals should send curriculum vitae, reprints of recent papers, a brief description of future research interests, and the names and addresses of three referees to: **Dr. Louise Prakash, Head, Molecular Biology Search Committee, Department of Biophysics, University of Rochester School of Medicine, Rochester, NY 14642.** *An Equal Opportunity Employer (M/F).*

POSITIONS OPEN

ASSISTANT PROFESSOR MOLECULAR BIOLOGY UNIVERSITY OF ILLINOIS AT CHICAGO

The Laboratory for Molecular Biology of the Department of Biological Sciences invites applications for a tenure-track faculty position at the level of assistant professor to begin September, 1990. The Laboratory is interested in further expanding its strong molecular genetics research group. Outstanding candidates with promising research programs utilizing molecular and/or genetic approaches to modern cellular or developmental problems will be considered. Successful candidates are expected to have a Ph.D. or M.D. degree with postdoctoral experience, and to provide evidence that they can pursue a vigorous, independent research program, and contribute to the Department's teaching program. Please apply before 1 November 1989, by sending curriculum vitae, description of research interests, and names of at least three references to: **Molecular Biologist Search Committee c/o Dr. Sidney B. Simpson, Jr., Head, Department of Biological Sciences (M/C 066), University of Illinois at Chicago, P.O. Box 4348, Chicago, IL 60680.** *UIC is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR (TENURE-TRACK). Qualifications: Ph.D. in the biological sciences (cell biology/cell physiology). Some teaching experience and evidence of scholarly ability is required. Duties will include teaching: cell biology, portions of a biotechnology program and a course in his/her area of expertise. Expertise in electron microscopy is desirable but not required. The successful applicant will be expected to develop a funded research program. There are opportunities for collaborative research in the areas of aquaculture, cancer research, cardiovascular physiology, and reproductive endocrinology. Forward curriculum vitae, and have three letters of reference sent by 23 October 1989 to: **Office of Faculty/Staff Relations, SUNY College at Brockport, Brockport, NY 14420.** *Affirmative Action/Equal Opportunity Employer.*

THE UNIVERSITY OF BRITISH COLUMBIA DEPARTMENT OF CHEMISTRY ASSISTANT PROFESSORSHIP

The Department of Chemistry, University of British Columbia, invites applications for a tenure-track assistant professorship in experimental physical chemistry, starting 1 July 1990. Preference will be given to candidates who propose to carry out research in molecular dynamics, interactions, or interfacial phenomena; however, outstanding candidates in related areas of experimental physical chemistry will be considered. A Ph.D., postdoctoral experience, and a strong research track-record are required. The successful candidate would be expected to teach chemistry courses at the undergraduate and graduate level. The salary will be commensurate with education and experience.

The University of British Columbia offers Equal Opportunity for Employment to qualified female and male applicants. The position is subject to final budgetary approval and in accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.

Applications consisting of curriculum vitae, list of publications, summary of research interests, a detailed research proposal, and the names and addresses of at least three references should be sent to: **Larry Weiler, Professor and Head, Department of Chemistry, University of British Columbia, 2036 Main Mall, Vancouver, British Columbia, Canada, V6T 1Y6.** Closing date for applications will be 1 December 1989.

ASSISTANT/ASSOCIATE PROFESSORS IN MICROBIOLOGY/IMMUNOLOGY. Several tenure-track faculty positions are available to talented investigators who can establish independent, high quality research programs in molecular aspects of virology and immunology. Excellent new facilities and attractive start-up funds available. Submit curriculum vitae, statement of research interest and list of three references to: **Dr. Katherine Knight, Chairperson, Department of Microbiology, Loyola University of Chicago, Stritch School of Medicine, 2160 South First Avenue, Maywood, IL 60153.** *Loyola University of Chicago is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSORS, Tenure-track. CELL BIOLOGY. Search reopened. Research interests in cell and molecular structure and function; areas include, but are not limited to, motility, cell-cell interactions, receptors, intracellular signaling. Teaching cell biology is expected. May begin January, 1990. Review begins 1 November 1989.

POPULATION GENETICS/EVOLUTIONARY BIOLOGY. Research interests in theoretical or empirical population genetics. Teaching evolutionary biology is expected. Review begins 15 December 1989. Candidates must have a Ph.D., postdoctoral experience, and proven ability as independent researchers. Participation in graduate programs and allied staff courses is expected. Teaching experience is desirable. Start-up funds available. Forward curriculum vitae, a letter of research and teaching interests, and three letters of recommendation to: **Dr. Charles J. Amlaner, Chairman, Department of Zoology, University of Arkansas, Fayetteville, AR 72701.** *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT/ASSOCIATE PROFESSOR MOLECULAR BIOLOGY UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL (UNC-CH)

Tenure-track molecular biologist whose research efforts will be dedicated toward generating transgenic animal models pertinent to human diseases. Particular areas of interest can include but are not limited to cystic fibrosis lung disease. Qualifications should include an M.D. or Ph.D. plus at least 3 years of postdoctoral experience. The primary appointment may be in a basic science or a clinical department. Generous start-up funds are available. *UNC-CH is an Affirmative Action/Equal Opportunity Employer.* Interested candidates should send curriculum vitae, future research plans, and names of four references to: **Dr. Richard C. Boucher, University of North Carolina at Chapel Hill, Pulmonary Medicine, 724 Burnett-Womack Building, CB# 7020, Chapel Hill, NC 27599.**

The Department of Epidemiology at the Graduate School of Public Health of University of Pittsburgh is recruiting for an individual to direct the Nutrition Biochemistry Laboratory in the Department. The individual should have training in biochemistry and/or nutrition with an interest in working in a dynamic program that combines laboratory and population epidemiological studies related to the etiology and treatment of chronic diseases, including studies of lipids and lipoproteins, osteoporosis, diabetes, hypertension, cancer, and aging. The individual is expected to teach in the nutrition epidemiology component of the Department and develop a collaborative independent research program. A position at an **ASSISTANT OR ASSOCIATE PROFESSOR** level based on qualifications is possible. The position is available immediately. Send résumés to: **Lewis H. Kuller, M.D., Dr. P. H., University of Pittsburgh, Graduate School of Public Health, Department of Epidemiology, 130 DeSoto Street, Pittsburgh, PA 15261.** *The University of Pittsburgh is an Equal Opportunity/Affirmative Action Educational Institution.*

ASTRONOMY UNIVERSITY OF CALIFORNIA BERKELEY

The Department of Astronomy of the University of California, Berkeley, pending budgetary approval, expects to make a tenure-level appointment at the **ASSOCIATE/FULL PROFESSOR** level, effective 1 July 1990. We seek a candidate with experience in infrared instrumentation and observations, and who can interact fruitfully with theorists. Outstanding candidates in other fields will also be considered. The ideal candidate will have leadership experience and will be expected to play a major role in the development and use of infrared instrumentation for the Keck 10-meter telescope now nearing completion.

Applicants should send, as soon as possible, curriculum vitae, bibliography, and a brief statement of research interests, to: **Professor H. Spinrad, Chairman of Search Committee, Department of Astronomy, University of California, Berkeley, CA 94720.** Include the names of three references, but do not ask them to write letters until requested. Applications must be received by 1 December 1989.

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

POSITIONS OPEN

ASSISTANT RESEARCHER/POSTDOCTORAL SCIENTIST. Retroviral Research Laboratory, Cancer Research Center of Hawaii, has a full-time position beginning 1 December 1989, federal grant funding through September 1991, competitive renewal thereafter. Incumbent will conduct clinical and epidemiological studies of HTLV-I sequences in patients. The project will use molecular technology to develop diagnostic and prognostic markers to follow individuals infected with HTLV-I. Minimum requirements: Ph.D. in an appropriate discipline, or an M.D. with research experience in molecular biology. Minimum annual salary: \$29,676. To apply, send curriculum vitae and names, addresses, and telephone numbers of four references to: **Dr. Tom Humphreys, University of Hawaii, Pacific Biomedical Research Center, 1993 East-West Road, Honolulu, HI 96822.** Inquiries: 808-531-3538. Closing date 31 October 1989. *Equal Employment Opportunity/Affirmative Action.*

ASSISTANT/ASSOCIATE PROFESSOR MOLECULAR BIOLOGY UNIVERSITY OF NORTH CAROLINA CHAPEL HILL (UNC-CH)

Tenure-track position for a molecular biologist in the UNC CF/Lung Biology Center. Areas of research interest can include but are not limited to the molecular biology of (i) cystic fibrosis, (ii) intracellular signal transduction, (iii) ion transport proteins, and/or (iv) lung development.

Qualifications should include an M.D. or Ph.D. plus at least 3 years of postdoctoral experience. The primary appointment will be in a basic science or clinical department. Generous start-up funds are available. *UNC-CH is an Affirmative Action/Equal Opportunity Employer.* Interested candidates should send curriculum vitae, future research plans, and names of four references to: **Dr. Richard C. Boucher, University of North Carolina at Chapel Hill, Pulmonary Diseases, 724 Burnett-Womack Building, CB# 7020, Chapel Hill, NC 27599.**

ASSISTANT/ASSOCIATE PROFESSOR. The Department of Microbiology and Immunology of the University of Michigan Medical School seeks an immunologist for a tenure-track appointment as assistant associate professor. The successful applicant will establish an independent research program applying modern molecular/cell biological approaches to the study of the immune response. The position requires active participation in teaching of graduate and medical students. Salary support, a well-equipped laboratory and start-up funds are available from departmental resources. Send curriculum vitae, a brief statement of research interests, and names and addresses of three referees by 30 January 1990 to:

**Dr. J. Latham Clafin
Immunology Search Chairman
Department of Microbiology and Immunology
The University of Michigan Medical School
M6643/0620 Medical Science Building II
Ann Arbor, MI 48109-0620**

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

California—BIOCHEMISTRY FACULTY POSITION, California State University, Sacramento (CSUS). Applications are invited for a tenure-track position requiring a Ph.D. in biochemistry (or its equivalent) and an undergraduate degree in chemistry or biochemistry. Position involves teaching both lower division chemistry and general biochemistry and developing an active research program in biochemistry that involves both undergraduate and master's students. Preference given to candidates with recent research (preferably postdoctoral) and teaching experience, and hands-on experience with modern scientific instrumentation. Applications require curriculum vitae, undergraduate and graduate transcripts, three letters of reference attesting to teaching and research abilities, publications, and a description of future research projects suitable for undergraduate or master's degree students. Send to: **Professor James C. Hill, Chair, Department of Chemistry, CSUS, 6000 J Street, Sacramento, CA 95819** by 15 October 1989. *The Department is committed to improving the diversity of its faculty and encourages qualified women, underrepresented ethnic minorities, disabled individuals, and Vietnam-era veterans to apply for this position.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF ANATOMY/DEVELOPMENTAL NEUROBIOLOGIST. Applications are invited for a tenure-track faculty position. The faculty member will be expected to participate in teaching histology and anatomy to dental and dental hygiene students and to establish an independent research program with extramural funding. Individuals doing research in neural crest derivatives are particularly appropriate, although other areas of research will be considered. Send a complete curriculum vitae, a brief statement of research interests, selected reprints, and the names of three references to: **Dr. Lee Robertson, Department of Anatomy, School of Dentistry, Oregon Health Sciences University, 611 SW Campus Drive, Portland, OR 97201.**

An Equal Opportunity/Affirmative Action Employer.

ASSISTANT RESEARCH CHEMIST—The Department of Laboratory Medicine and Northern California Occupational Health Center at the University of California San Francisco (UCSF) is seeking a research chemist to develop novel methods of analysis for low concentrations of metals in biologic matrices and speciation of biologic forms or metal complexes. A Ph.D. in organic, analytical or pharmaceutical chemistry is required with two or more years of experience in metals chemistry, including metal chelation, derivatization, organometallic complexes, gas chromatography, mass spectrometry, atomic absorption spectrometry. Academic step and salary will be dependent on individual qualifications. *UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.* Send curriculum vitae to: **John Osterloh, M.D.,** by 10 November 1989, at: **Toxicology Laboratory, Room 3501, San Francisco General Hospital, 1001 Potrero Avenue, San Francisco, CA 94110.**

BIOCHEMISTRY, BIOPHYSICS, AND MOLECULAR BIOLOGY UNIVERSITY OF IOWA COLLEGE OF MEDICINE

The Department of Biochemistry of the University of Iowa seeks highly qualified applicants for a faculty position at the **ASSISTANT PROFESSOR** (tenure-track) **TO PROFESSOR** (tenured) level. Salary will be competitive and will depend on qualifications and experience. Support for equipping laboratories and initiating research programs will be excellent. Applicants with research in any area of biochemistry will be considered. Quality of research, not a specific research area, will be the primary criterion.

All applicants must have a relevant graduate degree (Ph.D., M.D. [or both] or equivalent foreign degree). Applicants for assistant professor rank should have at least 2 years of productive postdoctoral experience and the potential to initiate and maintain a rigorous research program. Applicants for associate or full professor rank should have well-funded, ongoing research programs and significant national stature in their research areas. In addition to establishing or continuing successful research programs, faculty participate in the department teaching programs. The training of graduate students and participation in appropriate graduate programs also is expected.

Applications should include a complete curriculum vitae and a summary of future research plans. Applicants for a junior faculty position should ask three scientists familiar with their work to write letters of reference. Applicants for a senior position should include the names of at least three references. Applications, nominations, and letters of reference should be sent to: **Alan G. Goodridge, Professor and Head, Department of Biochemistry, College of Medicine, University of Iowa, Iowa City, IA 52242.** *The University of Iowa is an Affirmative Action/Equal Opportunity Employer.*

CAREER OPPORTUNITY

A **RESEARCH POSITION** is available immediately to study growth regulators in insects. The position is part of a program involving application of biotechnology to forest pest control. The candidate should have proven experience in recombinant DNA techniques. *U.S. citizenship is required.* Initial appointment will be as a postdoctoral fellow, but the possibility exists for conversion to a permanent position. Starting salary is \$28,852 plus benefits. Send curriculum vitae with telephone numbers of three references to: **Dr. Shiv Hiremath, USDA Forest Service, 359 Main Road, Delaware, OH 43015.** Telephone: 614-369-4476.

Principal Research Scientists

Transgenic Mice And Tumor Biology

CYTOGEN Corporation has 2 senior staff positions available for individuals with a Ph.D. and 2-4 years experience to conduct and supervise advanced research with the objective of developing novel products for diagnosis and therapy of cancer.

TRANSGENIC MICE: To develop mice which express human gene products utilizing chromosome fragment transfer. Requires experience in microinjection, embryo transplantation and culture, mouse handling/breeding, cytogenetics. Experience with antibody assays and molecular biology techniques would be an asset.

TUMOR BIOLOGY: To develop new approaches to tumor immunotherapy using antibody delivery systems for drugs and immunomodulators and mouse tumor models. Requires experience in cellular immunology, immunochemistry, cytokines, mouse tumor models, mouse handling/injection.

CYTOGEN Corporation is an established biotechnology company with a commitment to research and development, particularly in the fields of cancer and cardiovascular disease. We are located in the Research Corridor of Princeton and Rutgers Universities, in an attractive suburban area 45 minutes from New York and Philadelphia. We offer competitive salaries and benefits.

For confidential consideration, please send resume with salary requirements/history, and indicating position desired, to: **Employment Manager, CYTOGEN Corporation, 600 College Road East, Princeton Forrestal Campus, Princeton, New Jersey 08540.** Equal opportunity employer m/f.

CYTOGEN

CORPORATION

Innovative Technology Targeted to Medical Needs

Viral Vaccine Research & Development Scientists

Commit To Your Future By Joining Lederle Today.

Lederle Laboratories, a division of American Cyanamid Company, is recognized internationally as a leader in the research, development and manufacture of vaccines for the prevention of viral and bacterial diseases. We're a company committed to our future; having recently launched our three-phase, \$260-million building program which will feature state-of-the-art research and manufacturing facilities. Currently, we are seeking two Ph.D. Scientists to join the Viral Vaccine Research and Development group of our Biologicals Department.

A postdoctoral position is available for a highly-motivated individual to work on the development of recombinant enteroviral vaccines. To qualify, you must be a recent graduate with a Ph.D. in Molecular Biology, Virology or Microbiology, have hands-on experience in molecular biology and be familiar with tissue culture techniques.

Additionally, we are seeking a development scientist to work closely with R&D and Production groups on the scale-up and transfer of new viral vaccines and techniques to manufacturing. Projects include cell culture production, protein purification, and the manufacture of subunit vaccines. To succeed, you must possess a Ph.D. degree and 3-5 years' post-doctoral training in one or several fields including Virology, Cell Biology, Protein Chemistry, or Immunochemistry.

We offer a state-of-the-art facility, competitive salary and excellent benefits. Please forward your resume with salary requirements, in confidence, to: **Daniel Nemeczek, Professional Employment Representative, LEDERLE LABORATORIES, American Cyanamid Company, Pearl River, NY 10965.** An equal opportunity employer, m/f.



Dedicated People Dedicated To People Since 1906.

NATIONAL INSTITUTE ON AGING
NATIONAL INSTITUTES OF HEALTH
PUBLIC HEALTH SERVICE
DEPARTMENT OF HEALTH AND HUMAN SERVICES

NMR Spectroscopists (2 Positions Available)

The Laboratory of Cellular and Molecular Biology at the Gerontology Research Center, National Institute on Aging, National Institutes of Health, PHS, DHHS is accepting applications for two available positions.

One position is for studies on the effect of aging on metabolic changes that occur during human exercise, as well as *in vivo* studies on animals using a Bruker Biospec 1.9 T/31 cm Spectrometer. The successful applicant for this position will bear primary responsibility for *in vivo* NMR operations in the laboratory, will collaborate on the ongoing programs, and will initiate other studies.

The second position is for collaborative studies on the mechanisms of RNA synthesis at the active site of RNA polymerase, being investigated using a Varian XL-200 NMR spectrometer, an IBM-200-D EPR spectrometer and a variety of other techniques.

Salary dependent on qualifications.

Other NMR instruments in the area are available for use in these studies.

A letter of application with a curriculum vitae and bibliography should be submitted to:

Dr. Gunther L. Eichhorn
Chief, Laboratory of Cellular and Molecular Biology
National Institute on Aging, Intramural Research Program
4940 Eastern Avenue
Baltimore, Maryland 21224



Further information can be obtained by contacting Dr. Eichhorn at (301) 550-1807.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

B.S./MS. Scientist Drug Metabolism and Biochemical Toxicology

The Animal and Exploratory Drug Metabolism Department at Merck Sharp and Dohme Research Laboratories has an opening for a highly motivated B.S./M.S. or equivalent, chemist/biochemist who is interested in pursuing a career in drug metabolism and biochemical toxicology.

The successful candidate will be involved with *in vivo* and *in vitro* metabolism studies of drugs and the interaction of reactive metabolic intermediates with cellular molecules. The candidate should have some knowledge in drug metabolism with demonstrated strength in modern analytical techniques such as HPLC. Other desirable qualifications include:

- Experience in the isolation, purification and characterization of metabolites from biological fluids.
- Experience in handling radiolabeled chemicals.
- Skills in cell culture, organ perfusion, hepatocytes and small animal handling techniques.

Merck Sharp and Dohme Research Laboratories is located in Rahway, New Jersey, approximately 25 miles from New York City. Our salaries, benefits, and growth potential are excellent. Those interested in this position should send an application letter with an updated resume and 3 references to: **Mr. Daniel Hoffman, Merck & Company, P.O. Box 2000, Rahway, NJ 07065.**



Merck & Co., Inc.

RESEARCH SCIENTISTS

Triplex Pharmaceutical Corporation, a newly formed company focused on development of oligonucleotide-based therapeutic agents, has immediate employment opportunities available for highly motivated individuals on its Research and Development team.

CHEMISTRY

Director of Chemistry: Requires a PhD with minimum 5 years experience and demonstrated expertise in design and synthesis of biologically active molecules, excellent publication record and experience in directing a research group. Expertise in nucleic acid chemistry as well as industrial experience will be considered assets.

Research Associate/Post Doc: Requires PhD or MS with 3-5 years experience in nucleic acid chemistry. Special consideration will be given to those with a strong background in synthetic organic chemistry and preparative HPLC.

CELL BIOLOGY

Research Associate/Post Doc: Requires PhD or MS with 3-5 years in cell culture and cell biology. Experience in purification of RNA and DNA, cell fractionation and electrophoresis of nucleic acids and proteins is highly desirable.



Triplex offers competitive salaries and benefits as well as opportunities for publication and career growth in an exciting research program. For immediate consideration send a c.v. with names, addresses and phone numbers of three references to:

Triplex Pharmaceutical Corporation
P.O. Box 7307
The Woodlands, Texas 77387-7307
Fax: 713/363-1168

An Equal Opportunity Employer

ABBOTT LABORATORIES

Abbott Laboratories' Pharmaceutical Products Division is a leader in the development and manufacture of anti-infective, cardiovascular and anti-convulsant/neurological products. Supported by a significant investment to R&D, twice the industry standard, we perform renowned clinical studies, and maintain a variety of specialized labs featuring state-of-the-art developmental technologies. Our extensive technical resources create a superior environment for those who would like to make a significant personal and professional commitment.

ENDOCRINOLOGIST

Pharmaceutical Products Division

A reproductive endocrinologist is needed to design and implement *in-vivo* testing strategies in the General Pharmacology department. The selected candidate will possess a Ph.D. in endocrinology, physiology or pharmacology, with 2-3 years postdoctoral experience in reproductive research. An extensive knowledge of reproductive function and control is required, with experience in animal surgery and methods for evaluation of effects on ovulation and spermatogenesis. Familiarity with experimental models of prostatic cancer and endometriosis, and methods for *in-vitro* fertilization (IVF/GIFT) is desirable.

Abbott Laboratories offers each employee an environment in which to build a distinguished career, and provides competitive compensation and benefits including a profit sharing and stock retirement plan. We are located in an attractive suburban area approximately 30 miles north of Chicago. If you believe that you can benefit from a long-term association with Abbott, and your credentials meet the indicated requirements, please send your resume with salary history to: **Patricia Handy, Corporate Placement, Job #7613, Abbott Laboratories, 1 Abbott Park Rd., Abbott Park, IL 60064.** (To facilitate the handling of your resume, please indicate Job number on your cover letter or resume.) Abbott is an Affirmative Action Employer.

ABBOTT LABORATORIES



Quality
Health Care
Worldwide

1888-1989



We've been quietly improving
the world's health for 113 years.

Today, that commitment continues worldwide with the discovery, development and manufacturing of the highest quality health care, diagnostic, and agricultural products. With current investments of more than \$600 million in research and development programs, our continued success requires the finest scientific talent available.

Opportunities currently exist for BS/MS scientists with research experience in the following areas:

Central Nervous System, including Molecular Neurobiology
and Serotonin Receptor Biochemistry

Cardiovascular Pharmacology/Biochemistry, including
Blood Coagulation and Atherosclerosis

Molecular and Cell Biology

Animal Health Infectious Disease

Immunology

Biochemical Research and Development

Monoclonal Antibody Research

Fermentation Process Research and Development

We are seeking candidates with degrees in Biology, Pharmacology, Biochemistry, Molecular Biology, Immunology, Biophysics, Microbiology and Biochemical Engineering with related experience. Knowledge of animal handling, tissue culture, computer and statistical procedures, and radioisotopic methodologies will be useful. Excellent verbal and written communication skills are essential.

In addition to attractive salaries and benefits, Lilly provides excellent programs for continued growth including ongoing training through in-house seminars and off-site programs. We also provide financial assistance for job-related advanced degrees and coursework.

If you have a personal commitment to the future of global health care, bring your talents to Lilly. Please send your resume, with indication of your area of interest, to:

Ms. Ann Hinson
Corporate Recruiting
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285

Eli Lilly and Company is an equal opportunity employer.



Commitment to Excellence

POSITIONS OPEN

BIOCHEMISTRY FACULTY POSITIONS

The Department of Biochemistry of the West Virginia University School of Medicine has two tenure-track positions available at the assistant, associate or full professor level. A biochemist using **MOLECULAR BIOLOGICAL TECHNIQUES** is sought for one position. All areas of molecular biology will be considered. The other position is for a **PROTEIN CHEMIST**. All areas of protein chemistry will be considered. Applicants are expected to establish independent research programs and participate in teaching. Candidates should have a Ph.D., postdoctoral experience and demonstrated research productivity. Send curriculum vitae, a brief statement of research interests, and three letters of recommendation to: **Dr. Michael Miller (molecular biology) or Dr. Mary Wimmer (protein chemistry), Department of Biochemistry, West Virginia University Health Sciences, Morgantown, WV 26506**. Review of applicants will begin 1 October 1989 and continue until a suitable applicant is hired. *Equal Opportunity Employer.*

BONE MARROW TRANSPLANTATION DIRECTOR/SCIENTIFIC RESEARCH

Baylor University Medical Center, Dallas, Texas, seeks a bone marrow transplantation scientific research director. This individual would add to a well established clinical marrow transplantation research center. This program is a major referral center for marrow transplantation and leukemia/lymphoma research in northern Texas and surrounding states. Qualified applicants should have a Ph.D. or M.D. degree and an established record of achievement in an area directly related to bone marrow transplantation (i.e., graft-vs-host disease, evaluation of immune recovery post transplant, evaluation of growth factors in transplantation, applications of molecular biology/gene rearrangement in marrow transplantation). The successful candidate will be responsible for directing laboratory based research projects, publishing in peer reviewed journals, and writing successful grant applications.

Interested candidates should send curriculum vitae to: **Joseph W. Fay, M.D., Director, Bone Marrow Transplantation Research Center, Baylor University Medical Center, 3500 Gaston Avenue, Sammons Towers, Suite #410, Dallas, TX 75246. Telephone: 214-820-2619.**

DEPARTMENT OF ZOOLOGY UNIVERSITY OF WASHINGTON CELL BIOLOGIST

A tenure-track faculty position is available for a cell biologist. Those having research interests in extracellular matrix, cell adhesion, intracellular transport, cytoskeleton, or signal transduction are especially encouraged to apply. Appointment will be at the assistant professor level. Responsibilities include teaching at the undergraduate and graduate level, and research in areas appropriate to the individual's field of specialization. Applicants should submit curriculum vitae, three publications, statements of specific interests, and three letters of recommendation to: **Dr. R. T. Paine, Chairman, Department of Zoology NJ-15, University of Washington, Seattle, WA 98195**, by 15 November 1989. *The University of Washington is building a multicultural faculty and strongly encourages applications from female and minority candidates. Preference will be given to applicants who can serve well an increasingly diverse University community.*

CHAIRPERSON DEPARTMENT OF BIOLOGY

The University of Miami is searching for a highly qualified individual for chairperson of the department. Candidates should have an active research program, demonstrated administrative skills and an ability to facilitate interaction among biologists with diverse interests. The chairperson will play a major role in filling three open, tenure-track lines. The department includes 21 faculty and has an established graduate program leading to the Ph.D. Several biology-related units of the University afford opportunities for collaboration. Candidates should submit curriculum vitae and the names of four references to: **Dr. William Evoy, Chairperson of Search Committee, Department of Biology, University of Miami, P.O. Box 249118, Coral Gables, FL 33124**. Deadline for application is 1 October 1989 or until the position is filled. *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CELL BIOLOGIST

CellPro, Inc., an early stage company formed to develop devices and instrumentation for the isolation, purification, growth, and delivery of cells for diagnostic and therapeutic purposes, has need of a senior scientist with a Ph.D. in cell biology or cellular immunology and at least 5 years of postdoctoral experience in membrane biology, tissue culture, monoclonal antibodies, or related areas. CellPro offers competitive salaries and benefits and an exciting start-up environment. Send résumé to: **Director of Personnel, CellPro, Inc., 1309 Summit Avenue, Seattle, WA 98101.**

CHAIRPERSON DEPARTMENT OF NEUROLOGY

The University of Mississippi Medical Center invites nominations for the position of Chairperson of the Department of Neurology in the School of Medicine. The Mississippi Medical Center is the state's only health sciences campus. It includes Schools of Medicine, Nursing, Health Related Professions and Dentistry; Graduate Programs in the Medical Sciences and the 593-bed University Hospital, teaching hospital for all programs. Send letters of nomination to: **Dr. Patrick H. Lehan, Chairman, Search Committee, c/o the Department of Medicine, the University of Mississippi Medical Center, 2500 North State Street, Jackson, MI 39216-4505**. Deadline for completed applications is 1 January 1990. *Equal Opportunity Employer. M/F/H/V.*

CHEMICAL SAFETY SPECIALIST. The Department of Chemistry at Texas A&M University invites applications and nominations for the position of chemical safety specialist. The individual occupying this full-time permanent staff position will plan, coordinate, and supervise all safety- and health-related activities within the Department. Responsibilities will include: (i) ensuring departmental compliance with the requirements of all applicable Federal, State of Texas, and University regulations involving safety and health practices, including the Texas Hazard Communication Act and the Occupational Safety and Health Administration's Hazard Communication Standard; and (ii) monitoring departmental laboratory safety practices and chemical waste disposal procedures. Related duties will include conducting safety training sessions for faculty, staff, and students, assembling and maintaining inventory records of hazardous departmental chemicals, and maintaining and updating a Material Safety Data Sheet database. The successful candidate for this position will have earned at least a B.S., and preferably an M.S., degree in chemistry, and will have 2 to 3 years of postgraduate experience in an industrial or academic laboratory, preferably with duties involving laboratory safety and health practices. Excellent English communication skills will also be required. Starting salary for the position will be commensurate with the experience of the successful candidate. Interested applicants/nominees should send curriculum vitae and arrange for three letters of reference to be sent no later than 30 September 1989 to: **Dr. Michael P. Rosynek, Associate Head, Department of Chemistry, Texas A&M University, College Station, TX 77843**. *Texas A&M University offers an excellent package of employee benefits, and is an Equal Opportunity/Affirmative Action Employer.*

DEVELOPMENTAL BIOLOGIST THE UNIVERSITY OF CHICAGO

The Department of Organismal Biology and Anatomy at the University of Chicago invites applications for a tenure-track position. We seek an individual who will pursue an active research program on basic developmental mechanisms at cellular or molecular levels, and who will interact effectively with faculty investigating fundamental issues in organismal biology. Research can involve either invertebrates or vertebrates, and can deal with any area of development that has organismal consequences. Such areas include limb formation, neural crest development, pattern formation, role of extracellular matrix in morphogenesis, muscle plasticity, calcified tissue development, development of nervous system, etc. Applicants should send curriculum vitae, statement of research interests, and names of references to: **Dr. Philip S. Ulinski, Department of Organismal Biology and Anatomy, 1025 East 57th Street, Chicago, IL 60637**. *The University of Chicago is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

CURATORIAL POSITION, POLYCHAETES.

Applications solicited for assistant or associate curator, Section of Invertebrates. Responsibilities consist of collections-oriented research on systematics of polychaetes, active participation in management of a major collection, development of external funding for research and collections, and participation in public program activities. Doctorate required. Send curriculum vitae, description of research interests, collection management and public program experience, grant/contract funding, names of three references, by 1 November 1989 to: **Dr. Gordon Hendler, Invertebrates Section, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007. Telephone: 213-744-6391 or 3367. An Equal Opportunity Employer.**

DEVELOPMENTAL AND CELL BIOLOGY TWO TENURE-TRACK FACULTY UNIVERSITY OF ARIZONA

As part of a continuing expansion, the Department of Molecular and Cellular Biology anticipates hiring two faculty members in 1990. Preference will be given to applicants with research interests in developmental or cellular biology of multicellular organisms, although exceptional candidates in other areas will be considered. Candidates at the junior (assistant) and senior (associate/professor) levels will be considered. Successful candidates will be housed in new laboratory space currently under construction. They will be expected to establish a competitive research program and teach at the undergraduate and graduate levels. Send curriculum vitae, a one- to two-page statement of research interests, and have at least three supporting letters sent to: **Professor Samuel Ward, Head, Department of Molecular and Cellular Biology, Biosciences West Building, Room 308, University of Arizona, Tucson, AZ 85721**. Application deadline is 15 October 1989, or until positions are filled. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

DIRECTOR, OKLAHOMA CENTER OF MOLECULAR MEDICINE

Attractive, unusual opportunity for administrative scientist with molecular medicine research center. The Center is new, contains six unfilled endowed chairs, involves a university academic medical center, a second comprehensive university, and a major medical research foundation. The Center will have 50 collaborating scientists and an annual multimillion-dollar budget. The Director, equivalent to a chief operating officer, should possess an M.D. or Ph.D. degree in a biological science, professional expertise in academic and commercial biotechnology environments, and a demonstrated record of scientific accomplishment and managerial expertise. A senior level faculty position in the appropriate department of the applicant's field has been created at the University of Oklahoma College of Medicine.

Applications will be received through 14 October 1989. Qualified applicants should submit their résumés, including the names, addresses, and telephone numbers of three professional references to:

**Patrick A. McKee, M.D.,
Chairman, Department of Medicine and
Chairman, Executive Operating Committee for the
Oklahoma Center of Molecular Medicine
Post Office Box 26901
Oklahoma City, OK 73190.**

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

EDITOR

Staff position as manuscript editor in large midwestern medical center is open for person with medical or biological science background, to replace a retiree. Ph.D. or M.D. degree and at least 5 years of experience in biomedical research or clinical practice preferred. Editing experience helpful but not essential.

Excellent benefits. Starting date negotiable. Deadline for application, 1 November 1989. Send descriptions of education, professional experience, and relevant achievements to: **Dr. B. K. Forscher, Section of Publications, Mayo Clinic, Rochester, MN 55905. An Affirmative Action/Equal Opportunity Employer.**

U.S. DEPARTMENT OF ENERGY
OFFICE OF HEALTH AND
ENVIRONMENTAL RESEARCH

Alexander Hollaender
DISTINGUISHED

Postdoctoral Fellowship Program

Research Opportunities
in Energy-Related
Life, Biomedical, and
Environmental Sciences

- Research in OHER-sponsored programs
- Tenable at various national laboratories
- Stipends \$35,000
- Doctoral degree received after April 1, 1988
- U.S. citizens or PRA eligible

Information and applications:



Hollaender Postdoctoral Fellowships
Science/Engineering Education
Oak Ridge Associated Universities
P.O. Box 117
Oak Ridge, TN 37831-0117
(615) 576-3190

Deadline January 16, 1990

DEAN

College of Natural and Agricultural Sciences University of California, Riverside

The Dean oversees the Land-Grant mandate in teaching, public service, and research in the College and normally serves as the Director of the Division of Agriculture and Natural Resources (DANR) on the Riverside campus, including the Agricultural Experiment Station. The College has 15 academic departments and research units containing 240 ladder-rank FTE, 30 other academic FTE, and 475 non-academic staff FTE. The annual College/DANR budget is over \$30 million. The campus is growing rapidly and is surrounded by a supportive and rapidly growing external citizenry.

Applicants must have a distinguished record of research, teaching and service appropriate to an academic appointment at the level of full professor in the College department of the candidate's discipline as well as a record of successful leadership and creative management. Salary will be commensurate with experience and qualifications. The negotiable target starting date is July 1, 1990.

A curriculum vitae and the names and addresses of six references are required from each applicant. The search will continue until the position is filled.

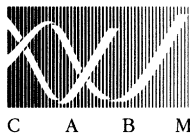
The University of California, Riverside is an equal opportunity/affirmative action employer. Women and minorities are encouraged to apply.

Nominations and applications will be reviewed starting October 1, 1989 and should be addressed to:



**Professor Irwin P. Ting, Chair
Search Committee for the Dean
Office of the Chancellor
University of California, Riverside
Riverside, CA 92521.**

Molecular Biology



A Postdoctoral position is available immediately to study the structural basis of ion channel function. The project involves characterization of reconstituted nicotinic acetylcholine receptor in different conformations using fluorescence spectroscopy, circular dichroism and chemical labeling. Experience with these techniques and with reconstitution of membrane proteins or HPLC is preferred but not required. Salary is \$21,000. Send CV and three letters of reference to Dr. Michael P. McCarthy.

The Center for Advanced Biotechnology and Medicine is a newly established molecular biology research program jointly administered by Rutgers University and the University of Medicine and Dentistry of New Jersey and funded by the New Jersey Commission on Science and Technology.

CABM, 675 Hoes Lane,
Piscataway, NJ 08854-5635
An Affirmative Action-Equal
Opportunity Employer.



Neuroscientist

Parke-Davis Pharmaceutical Research Division, Warner-Lambert Company, has an immediate opening for a Neuroscientist in the Pharmacology Department at their Pharmaceutical Research Facility in Ann Arbor, Michigan.

Responsibilities of the position will be to use in vitro physiological assays for the discovery of new drugs that affect mammalian central or sensory neurons, supervision of one or more assistants, and the summarization and communication of results, including preparation of manuscripts for publication.

The successful applicant will join an experienced multidisciplinary team of dedicated scientists working on novel treatments for human neurodegenerative diseases including Alzheimer's Disease.

The qualified candidate will have:

- A Ph.D. in a neuroscience related field with post-doctoral experience
- Experience in the assessment of the biological and molecular changes accompanying neuronal death and degeneration
- Excellent written and oral communication skills
- Ability to work as part of a team

Preference will be given to candidates experienced with aberrant processing of neuronal proteins in the central nervous system.

Employment will be at our modern facilities adjacent to The University of Michigan campus. We offer excellent benefits. Interested, qualified applicants should send curriculum vitae and salary requirements in confidence to: **Ms. S. Hultquist, Human Resources Representative, PARKE-DAVIS, 2800 Plymouth Road, Ann Arbor, Michigan 48105.** "Smoke-Free Work Environment"



PARKE-DAVIS
DIVISION OF WARNER LAMBERT COMPANY

"Equal Opportunity in Action"

POSITIONS OPEN

ENDOCRINOLOGIST: Department of Comparative Medicine tenure-track position available. Requirements include a solid publication record, evidence of independent research, interest in collaborative research, and ability to supervise a core laboratory. Research opportunities include monkey models of atherosclerosis and risk factors, reproductive function and behavior. Rank and salary commensurate with experience. Contact: Jay Kaplan, Ph.D., Department of Comparative Medicine, Bowman Gray School of Medicine, Wake Forest University, 300 South Hawthorne Road, Winston-Salem, NC 27103. Telephone: 919-764-3600. An Equal Opportunity/Affirmative Action Employer.

ENDOWED PARKE DAVIS CHAIR IN PHARMACEUTICS UNIVERSITY OF NEBRASKA MEDICAL CENTER COLLEGE OF PHARMACY

The University of Nebraska College of Pharmacy invites nominations and applications for an endowed chair, the Parke Davis Chair in Pharmaceutics. The College is seeking a research scholar with a demonstrated record of major extramural support in the broadly defined area of drug delivery systems, i.e., controlled or targeted drug delivery. The chair holder will be expected to interact with other research faculty on the University of Nebraska Medical Center campus, facilitate the development of a center for excellence in biopharmaceutical research, provide a leadership role in research in the College, and participate in the educational programs of the College. The successful candidate should possess an earned doctorate, and qualify for a tenured professorship in the College.

Inquiries, nominations, and applications in the form of curriculum vitae and brief description of research interests should be directed to:

Clarence T. Ueda, Ph.D., Dean
College of Pharmacy
University of Nebraska Medical Center
42nd & Dewey Avenue
Omaha, NE 68105-1065

The University of Nebraska Medical Center is an Equal Opportunity/Affirmative Action Employer.

ENVIRONMENTAL PATHOLOGY/NEUROTOXICOLOGY. Postdoctoral positions available. Application of cellular and subcellular morphometric and neurochemical methods for assessing neurotoxic lesions in mammals, using a model of molecular injury by mercury or pesticides. Inquiries: N. Karle Mottet, M.D., Program Director, Department of Pathology, SM-30, University of Washington, Seattle, WA 98195. U.S. citizen or permanent resident. Affirmative Action/Equal Opportunity Employer.

ENVIRONMENTAL TOXICOLOGY

Applications are invited for a tenure-track position in environmental toxicology, starting 1 January, 1 May, or 1 September 1990, at Governors State University. Candidates must have a Ph.D. with a major in toxicology or biology with a toxicology emphasis and be able to teach courses for a B.S. in biology and an M.S. in environmental biology. Courses will include toxicology, environmental toxicology, human physiology, and a liberal education course in science. Ability to teach in one or more of the following areas is desirable: developmental/reproductive biology, endocrinology, histology, anatomy, or genetics. Candidates must be dedicated to excellence in teaching as well as to continuing their research efforts with master's thesis students. Salary is competitive. Send résumé, transcripts, and the names and numbers of three or more references with your letter of application to: Dr. Peter Gunther, Chairperson, Search Committee, Division of Science, Governors State University, University Park, IL 60466-3199. Review of applications will start 1 November 1989 and will continue until the position is filled. GSU, located 35 miles south of Chicago, has an enrollment of 5500 upper division and graduate students in the College of Arts and Sciences, Business and Public Administration, Education and Health Professions. An Affirmative Action/Equal Opportunity University.

Research Scientist Drug Metabolism

We're the R. W. Johnson Pharmaceutical Research Institute, a member of The Johnson & Johnson Family of Companies. Our strategy is to maintain a fast-growing pharmaceutical business by continuing to develop products of the highest quality.

We currently have a significant career opportunity for an individual to become part of our Developmental Research team. To qualify, you should possess a Ph.D. in Toxicology/Pharmacology, Biology or Biochemistry and have experience in planning, conducting and evaluating studies toward the development of therapeutics.

Areas of research include support of toxicology studies, microsomal enzyme induction/inhibition, pharmacokinetics and drug absorption, excretion and tissue distribution. Experience in HPLC/GC analysis of drugs in biological matrices is desirable.

The position supports our important research endeavors and affords professional growth. We offer a competitive salary and the comprehensive benefits of a Johnson & Johnson Company, as well as a convenient suburban Philadelphia location. For immediate confidential consideration, please submit curriculum vitae and salary requirements to: J. Richardson, Sr. Employment Administrator, McNeil Pharmaceutical, Spring House, PA 19477.

An Equal Opportunity Employer, M/F



R.W. JOHNSON

PHARMACEUTICAL RESEARCH INSTITUTE

Postdoctoral Scientist

Enzymology

The department of Medicinal Chemistry at Smith Kline & French, a division of SmithKline Beecham, has an immediate opening for a postdoctoral scientist to work in an environment designed to foster innovative research and promote personal and professional growth. Publication of research in leading journals and interaction with the scientific community are strongly encouraged. Postdoctoral assignments are normally of two years duration.

The successful candidate will be involved in the isolation from bacterial expression systems of previously uncharacterized proteases of retroviral or mammalian origin which activate enzymes/proteins via proteolytic processing. The candidate will conduct kinetic analysis of the purified protease(s) to characterize substrates and elucidate details of its chemical mechanism, assist in structural characterization, and interact with synthetic chemists in the design and characterization of enzyme inhibitors of therapeutic potential.

The successful candidate will have:

- Ph.D. in Bio-Organic Chemistry, Biochemistry, or equivalent.
- Experience in enzyme isolation and enzymatic assay development.
- Experience in steady-state kinetic analysis and a working knowledge of biological reaction mechanisms. Familiarity with molecular biological methods and protein chemistry is desirable.

Based in a new state-of-the-art research facility in suburban Philadelphia near Valley Forge, Smith Kline and French provides a stimulating and challenging environment in which to grow. We offer an excellent salary, benefits, and relocation package. Please forward C.V. to Terry Gallagher, T112, Research and Development (L314), Smith Kline & French Laboratories, P.O. Box 1539, King of Prussia, PA 19406. We are an equal opportunity employer. M/F/H/V.

SK&F

A Smith-Kline Beecham Company

vrije universiteit amsterdam

The Department of Psychology in the Faculty of Human Movement Sciences seeks a

professor

in human movement psychology (m/f)

The Faculty of Human Movement Sciences consists of five departments: Psychology, Educational Sciences, Functional Anatomy, Exercise Physiology and Health Science, and Theory and History of Human Movement Sciences. These departments are responsible for teaching and research in the field of human movement.

In the department of Psychology basic research on complex human motor actions forms the core of the approved research program. Sections of this program are addressed to sports psychological and rehabilitation psychological topics.

Three accents are possible in the specialist teaching programmes provided by the Department: Human Movement Psychology, Sports Psychology and Rehabilitation Psychology.

The successful candidate will be able to demonstrate qualities of leadership that will further stimulate the teaching and research programs of the Department, both of which embrace a wide area of psychology.

It is expected that he/she/ will have:

- a Ph.D. (or its equivalent);
- carried out internationally recognized research on complex human motor actions as indexed by publications;
- experience in the organization and supervision of multidisciplinary research;
- a broad orientation to the field of psychology;
- up-to-date knowledge of theories concerning movement control and motor learning relevant to the psychology of human movement;
- affinity with sport- and rehabilitation psychology;
- a stimulating and enthusiastic approach to teaching together with good didactical qualities;
- demonstrable qualities in the supervision of undergraduate and graduate students;
- demonstrable management and administrative qualities.

Salary: the salary will be f 9.975, - per month. Only in special circumstances will a higher salary with a maximum of f 12.115, - be possible.

Further information on this function can be obtained from dr. F.C. Bakker, Van der Boechorststraat 9, 1081 BT Amsterdam, telephone 020-548 6265 or 020-548 7249.

Applications, quoting vacancy number 807-9469, must be sent within 15 days after the appearance of this advertisement to dr. G.A.C. Smid, secretary of the Faculty of Human Movement Sciences of the Free University, Van der Boechorststraat 9, 1081 BT Amsterdam.



Agricultural Biotechnology Research Scientists

CIBA-GEIGY's Agricultural Division is a leader in genetic engineering and in chemicals for the improvement and protection of crops. We have made a major commitment to expand biotechnological research at our facility in Research Triangle Park, NC. The creation of these two exciting positions reflects this commitment.

Insect Molecular Physiologist

Creative, accomplished individual will develop methods of identifying and purifying insecticidal materials and genetically engineer plants to produce such components. Must possess recent PhD or BS/MS in Biochemistry or Molecular Biology and have detailed knowledge of insect cell or molecular physiology. Experience in protein biochemistry and enzymology, and recombinant DNA technology would be distinct advantages.

Tissue Culture Scientist

The qualified individual will help in the development and engineering of plants using techniques such as callus, shoot and suspension cultures; the selection of stress tolerant lines; transformation; and the genetic analysis of novel plants derived from transformation and selection.

A BS or MS in a biological science is required, along with 3-5 years of related experience, which should include plant tissue culture. You should also be familiar with basic tissue culture techniques.

CIBA-GEIGY offers exceptional opportunities for career advancement, a stimulating work environment, as well as competitive salaries and generous company-paid benefits. Please send resume including three letters of professional reference to: **Dr. Mary-Dell Chilton, CIBA-GEIGY Corporation, 3054 Cornwallis Road, Research Triangle Park, NC 27709.** We Are An Equal Opportunity Employer M/F/H/V.

Science Serving Mankind

CIBA-GEIGY

POSITIONS OPEN

FACULTY POSITION: NUTRITION. RANK OPEN. Tenure-track position, starting August 1990. Required: Ph.D. in nutrition, strong science background, interest and experience in human nutrition. Desirable research areas: vitamins or nutrition and physical fitness. Instruct undergraduates/graduates in nutritional science, secure research funding, and conduct research. Send application letter, transcripts, résumé, and addresses of three references by 6 November 1989 to: **Dr. Eleanor Williams, Department of Human Nutrition and Food Systems, University of Maryland, College Park, MD 20742.** An Affirmative Action/Equal Opportunity Employer.

FACULTY POSITIONS DEPARTMENT OF CHEMISTRY COLLEGE OF LIBERAL ARTS

The Department of Chemistry, Wayne State University, is seeking to fill several faculty positions at various ranks.

BIOCHEMISTRY (JUNIOR LEVEL). Appointment will be at the assistant professor level. While research area is not specified, we are searching for a person who will complement rather than duplicate existing areas.

BIOCHEMISTRY (SENIOR LEVEL). Appointment will be at the associate or full professor level. We are seeking a person with an established research record who will assume a leadership role in a vigorous, young division of biochemistry.

BIO-RELATED. We are interested in a person with bio-systems research specialization in any of the bioanalytical, bioinorganic, bioorganic, or biophysical areas. Appointment will be made at the assistant or associate professor level. The actual research area is less important than how it complements existing research strengths.

EXPERIMENTAL PHYSICAL OR PHYSICAL/ANALYTICAL. Appointment will be made at the full, associate, or assistant professor level. We are interested in a person with a strong experimental research program. No area is specified, but it should be in a contemporary area of physical or physical/analytical chemistry.

Demonstrated excellence in research and a strong commitment to teaching at both graduate and undergraduate levels is essential. Candidates should send curriculum vitae, list of publications, and a brief description of research plans. Assistant professor applicants should arrange to have three letters of reference sent directly. Senior applicants will be consulted for letters of evaluation.

Applicants should respond by 13 October 1989. Review of candidates will be completed and interviews begin shortly thereafter. *We strongly encourage applications from minorities and women.* Respond to:

Professor Richard L. Lintvedt, Chair
123 Chemistry
Wayne State University
Detroit, MI 48202

*Wayne State University is an Equal Opportunity/
Affirmative Action Employer.*

FARM ADVISOR—URBAN ENVIRONMENTAL TOXICOLOGY, San Diego County. The University of California, Division of Agriculture and Natural Resources, Cooperative Extension is seeking a career-track academic candidate responsible for designing and implementing a research-based educational and applied research programs in environmental toxicology, pollution, and integrated pest management in an urban setting. Included are subjects of environmental residues of pesticides, pesticide alternatives, applications, handling, disposal, food safety and residues, and groundwater contamination. Assure Affirmative Action in development and delivery of programs. Minimum Master's degree or equivalent combination of education and experience in toxicology or other field related to pest management plant disease is required. An undergraduate degree preferred in field of entomology. Beginning salary CE assistant advisor rank, commensurate with experience and professional qualifications. For complete description and application, contact: **U.C. Division of Agriculture and Natural Resources Personnel, 6th Floor, 300 Lakeside Drive, Oakland, CA 94612-3560.** Telephone: 415-987-0088. Closes: 31 October 1989. Refer to: #A-89-117(R). *Affirmative Action/Equal Opportunity Employer M/F/H.*

POSITIONS OPEN

DEPARTMENT OF BIOLOGICAL SCIENCES UNIVERSITY OF SOUTH CAROLINA FACULTY POSITION IN PLANT BIOLOGY

Applications are sought for a tenure-track position available in 1990. We are especially interested in individuals applying molecular and biochemical techniques to questions in plant biology, but the specific field of research is open. Applicants must demonstrate a productive, independent research program. Generous start-up funds will be provided. Academic rank is open. Please send curriculum vitae, description of research interests and letters from three references by 15 October 1989 to: **Dr. David Lincoln, Plant Biology Search Committee, Department of Biological Sciences, University of South Carolina, Columbia, SC 29208.**

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

FACULTY POSITION, MICROBIAL PATHOGENESIS. Applications are invited for a tenure-track appointment at the assistant or associate professor level in the Department of Microbiology and Immunology, University of California, Los Angeles (UCLA), School of Medicine. Applicants should have a Ph.D. (or equivalent degree) and research interest in the pathogenesis of microbial diseases caused by bacteria or fungi. The candidate selected will participate in a program in molecular pathogenesis currently supported by an NIH training grant, in addition to teaching medical and graduate students. Salary and benefits will be commensurate with the candidate's qualifications. Applications should be submitted by 1 November 1989, and should be comprised of a letter of application, a complete curriculum vitae, copies of two recent publications, and names and addresses of three references. The complete application package should be submitted to: **Dr. Dexter H. Howard, Chairman, Department of Microbiology Search Committee, Department of Microbiology and Immunology, UCLA School of Medicine, Los Angeles, CA 90024-1747.** *UCLA is an Affirmative Action and Equal Opportunity Employer.*

The Department of Pathology at UMDNJ—New Jersey Medical School is recruiting for tenure-track full-time **FACULTY POSITIONS.** Individuals applying should have M.D. or Ph.D. degrees, and research expertise in molecular aspects of oncology, virology, or immunology. Faculty rank will be commensurate with experience. Send curriculum vitae and names of references to: **Dr. Karel Raska Jr., Chairman, Department of Pathology, UMDNJ—New Jersey Medical School, 185 South Orange Avenue, Newark, NJ 07103-2757.** *The UMDNJ is an Equal Opportunity/Affirmative Action Employer M/F/H/V.*

HEAD, ACADEMIC UNIT—A new School of Basic Life Sciences is searching for an established researcher with academic experience to direct the Division of Structural and Systems Biology. This unit is involved in a doctoral program with participation in cell biology, neurobiology, and molecular biology. Its faculty also teach in the health science professions in the areas of cell biology, anatomy, neurosciences, physiology and histology. A person with an established record of research support in any aspect of modern biochemistry, cell or molecular biology, including molecular immunology and neurobiology, is sought for a tenured position as Division Head and the opportunity to expand a new graduate program revolving around structural and functional aspects of molecular recognition in biological systems.

Applications should be received by 1 November 1989; however, they will be accepted until the position has been filled. Send letters of interest, including curriculum vitae and names of at least three prospective references to:

Dean Marino Martinez-Carrion
School of Basic Life Sciences
University of Missouri—Kansas City
Kansas City, MO 64110

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

POSITIONS OPEN

FACULTY POSITION IN ANATOMY AND HISTOLOGY

Faculty tenure-track position available 1 October 1989, Department of Anatomy and Histology, Auburn University. Ph.D. required with preference given to those with the D.V.M. Should have demonstrated experience in research, publication, teaching, and grantsmanship capable of attracting extramural funding. The department has been under new leadership for 12 months and is undergoing change and expansion in research. At the present time the primary departmental research emphasis is on neuroscience, particularly as it may correlate with the development of biological detection systems. Other faculty research areas include osteology (biochemical and morphological), embryo transfer and ultrasonography. The research efforts of the individual should complement one of the current departmental research areas by the development of an independent program, at the molecular or subcellular level. Performing collaborative research and assisting to some degree in the teaching of professional and graduate programs is expected by the department. Rank and salary commensurate with qualifications and experience. Contact: **Dr. L. M. Krista, Anatomy Department, College of Veterinary Medicine, Auburn University, Auburn, AL 36849.** *Auburn University is an Affirmative Action/Equal Opportunity Employer. Minorities and women are encouraged to apply.*

USDA FELLOWS—BIOTECHNOLOGY AND CELL BIOLOGY OF DOMESTIC ANIMALS: \$15,000 annual fellowships leading to a Ph.D. in disciplines related to Molecular and Cell Biology, Dairy and Animal Science and Veterinary Science. Applications from minority students are encouraged. Applicants must be U.S. citizens and submit a concise curriculum vitae, a transcript of all college courses, GRE scores, and three letters of recommendation to: **Dr. R. Deaver, The Pennsylvania State University, 324 Henning Building, University Park, PA 16802.** Telephone: 814-863-0832.

GENETICIST

Applications are invited for a tenure-track assistant professorship in the Department of Zoology, University of Toronto, beginning 1 July 1990. We are seeking an outstanding and innovative geneticist who has recently received his/her Ph.D. degree (preferably with postdoctoral experience in molecular, developmental and/or evolutionary genetics). The successful candidate will be expected to establish a vigorous, independent research program and to teach genetics at undergraduate and graduate levels. Salary will be commensurate with experience and qualifications. By 15 November 1989, applicants should send a current curriculum vitae, a description of their future research plans and the names, addresses and telephone numbers of at least three referees. If they wish, applicants may arrange with their referees to send letters on their behalf. Send materials to: **Dr. A. M. Zimmerman, Geneticist Search Committee, Department of Zoology, University of Toronto, Toronto, Canada, M5S 1A1.** *In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents (landed immigrants) of Canada. Applications are invited from all qualified women and men.*

JUNIOR/SENIOR FACULTY POSITIONS MOLECULAR BIOLOGY/BIOCHEMISTRY

The Department of Biochemistry at Indiana University School of Medicine is seeking applicants for two full-time, tenure-track positions at the assistant, associate, or full professor level. Applicants should have a Ph.D., M.D., or equivalent degree and postdoctoral experience in molecular biology/biochemistry. It is expected that the new faculty will develop independent research programs in areas of molecular biology/biochemistry, including regulation of eukaryotic gene expression, DNA recombination/gene targeting, DNA replication and repair, DNA-protein interactions, macromolecular structure, cellular and metabolic regulation. Significant space and start-up funds are available. Faculty are involved in both graduate and medical programs. Applicants should submit their curriculum vitae, a description of research plans, and the names of three references to: **Dr. Peter J. Roach, Department of Biochemistry, Indiana University School of Medicine, Indianapolis, IN 46202-5122.** *Indiana University is an Equal Opportunity/Affirmative Action Educator, Employer and Contractor.*

POSITIONS OPEN

MICROBIOLOGIST. The Biology Department of Albion College is seeking a broadly-trained microbiologist with experience in such areas as bacteriology, immunology, or environmental microbiology to fill a tenure-track position as assistant professor to begin in August, 1990. A Ph.D. is required, and teaching experience is preferred. The successful candidate will be expected to teach an upper level, undergraduate course in general microbiology with lab. The candidate will also share responsibilities in introductory biology courses. Modern facilities include TEM, SEM, an incubator-shaker, controlled environment chambers, and a 130-acre nature center. A research program incorporating undergraduate students is expected. Albion College encourages applications from women and minority candidates. Send letter of application, current curriculum vitae, transcripts, and three letters of reference to: **Dr. Jeffrey C. Carrier, Chair, Biology Department, Albion College, Albion, MI 49224.** Deadline for applications is 1 November 1989. *Albion College is an Equal Opportunity Employer.*

MOLECULAR EVOLUTION. The Department of Ecology and Evolution at The University of Chicago announces a search to fill a position in the area of molecular evolution/variation. The appointment may be at any level. Please send a letter of application, curriculum vitae, reprints and/or recent manuscripts, a statement of research interests, and have three letters of recommendation sent to: **Molecular Evolution Search Committee, Department of Ecology and Evolution, The University of Chicago, 915 East 57th Street, Chicago, IL 60637.** Deadline for receipt of applications is 20 October 1989. *Affirmative Action/Equal Opportunity Employer.*

MOLECULAR GENETICIST to establish a new laboratory in our Department of Genetics. The successful candidate will be expected to develop a strong independent research program and will have opportunities to collaborate in ongoing research involving human subjects and our unique pedigreed colonies of 3000 nonhuman primates and 1200 marsupials. Major projects involve comparative gene mapping, genetic/dietary interactions in relation to lipoproteins and atherosclerosis, gene regulation in relation to hypertension-induced cardiac hypertrophy, genetics and gene regulation in relation to alcohol metabolism, X-chromosome inactivation, and primate evolution and speciation. This is an excellent opportunity for a creative scientist in a young expanding department. Salary and rank will be commensurate with experience. Please mail résumé, statement of research interests and names, addresses, and telephone numbers of three references to: **Personnel Director (15), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284.** *Equal Opportunity Employer M/F.*

MOLECULAR RADIOBIOLOGIST

The Department of Radiation Oncology at the University of North Carolina in Chapel Hill invites applications for a tenure-track position at the assistant/associate professor level. We are seeking a candidate who will develop a strong research program with a specific emphasis on the application of modern molecular biological techniques to the study of cellular and tissue response to free radical damage. Preference will be given to candidates who have relevant postdoctoral experience and whose research program complements existing programs in nucleic acid radiation chemistry and in cellular and tumor radiation biology. Applications including curriculum vitae and the names and addresses of three academic referees should be sent by 15 October 1989 to: **Dr. James A. Raleigh, Department of Radiation Oncology, North Carolina Memorial Hospital, Chapel Hill, NC 27514.**

UNC is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to identify themselves voluntarily in their applications.

NEUROPHYSIOLOGY

Assistant professor position available to work in animal- and human-evoked potential research and clinical monitoring. Must have Ph.D. in biological sciences or biomedical engineering. Send curriculum vitae or call: **John Oro, M.D., Division of Neurosurgery, University Hospital, One Hospital Drive, Columbia, MO 65212.** Telephone: 314-882-4908.

POST-DOCTORAL OPPORTUNITIES

CYTOGEN Corporation is an innovative biotechnology company committed to monoclonal antibody research, diagnosis and therapy for both cancer and cardiovascular disease. We have several on-going clinical trials using site-specific conjugates of anti-cancer antibodies.

This creative Biotech environment is ideal for POST-DOCTORAL SCIENTISTS experienced in the following areas:

- Molecular recognition
- Drug-delivery
- Novel Cytotoxic delivery
- Chimeric antibodies
- Bio-analytical chemistry
- Novel application of radioisotopes
- Clinical assay development
- Animal models for cancer and cardiovascular disease

Our Program offers a two-year tenure with a competitive salary and benefits, as well as relocation assistance. The successful applicants will be encouraged to publish their results.

For confidential consideration, please send resume with salary requirements, indicating area of interest, to: **Employment Manager, CYTOGEN Corporation, 600 College Road East, Princeton, New Jersey 08540.** Equal opportunity employer m/f.

CYTOGEN

CORPORATION

Innovative Technology Targeted to Medical Needs

STAFF MEMBER

Los Alamos National Laboratory, a worldwide leader in scientific research, is seeking an individual for its Life Sciences Division.

Responsibilities include conducting research in biochemistry, physiology and molecular biology of trace metal tolerance and degradation of toxic organic molecules in higher plants. Individual will also develop methods for practical application and environmental limitation as well as study the structure function relationships in metal bindings compounds.

Position requires significant recent experience in isolation and chemical characterization of metal-binding polypeptides and other secondary metabolites produced by plants. Experience in enzymology and study of biochemical processes necessary for synthesis for these compounds is essential as well as familiarity with methods of differential screening of genes involved in metal tolerance. Experience in different aspects of plant tissue culture desirable. A PhD in biology, botany or biochemistry and at least two years of postdoctoral research studying biochemical or molecular mechanisms of metal tolerance in higher plants or equivalent combination of education and work related experience is required.

For consideration, please send resume to: **Ray Archuleta (MS P280), Personnel Services Division 90600-DS, Los Alamos National Laboratory, Los Alamos, NM 87545.**

Affirmative Action/Equal Opportunity Employer. Must be able to obtain a Department of Energy Security Clearance.

University of California

Los Alamos

POSITIONS OPEN

NEUROBIOLOGIST. The School of Biological Sciences has an immediate opening for an individual with research interests in cellular neurobiology (vertebrate or invertebrate). This is a non-tenure-track visiting assistant professor position. The initial appointment will be for 1 year, but is renewable for up to 5 years. Opportunities exist for both collaborative and independent research. Teaching duties will alternate between an undergraduate course in animal physiology and a graduate course in neurobiology. Competitive salary and research facilities are available. Applicants must have a Ph.D. and some postdoctoral experience. Send curriculum vitae and the names, addresses, and telephone numbers of three references by 15 November 1989 to: **Dr. Michael S. Dekin, School of Biological Sciences, University of Kentucky, Lexington, KY 40506-0225.** The University of Kentucky is an Affirmative Action/Equal Opportunity Employer.

NEUROPATHOLOGIST, ASSISTANT PROFESSOR, TENURE-TRACK POSITION available as of 1 July 1990. Board certification or eligibility in anatomic pathology and neuropathology is required. The position includes diagnostic, teaching and research responsibilities. Send curriculum vitae and names of three references to: **Pierluigi Gambetti, M.D., Division of Neuropathology, Institute of Pathology, Case Western Reserve University, 2085 Adelbert Road, Cleveland, OH 44106.**

NEUROSCIENTIST UNIVERSITY OF MINNESOTA

The Department of Neurosurgery at the University of Minnesota seeks a faculty member whose research emphasizes cellular or molecular neurobiology. Areas of interest include but are not limited to brain tissue grafting and neuro-oncology. Successful candidate should have interests compatible with the clinical and basic science research programs of the Department of Neurosurgery. This position will be a full-time position at either the rank of assistant professor on tenure-track or associate professor with tenure. Faculty rank will be commensurate with degree of experience. It is expected that the applicant will hold a joint appointment in the Department of Cell Biology and Neuroanatomy. Also, it is anticipated this individual would become actively involved in the Graduate Program in Neuroscience and participate in the instruction of graduate and professional students in the health sciences.

The candidate must hold an M.D. or Ph.D. degree, and should present a record of productivity and distinction in cellular or molecular neuroscience research and should be capable of obtaining funding for research programs through national agencies. The individual should have demonstrated effectiveness in teaching in an academic medical institution.

Send letter of application, curriculum vitae and three references to: **Dr. Timothy J. Ebner, Chair, Search Committee, Department of Neurosurgery, Box 96 UMHC, University of Minnesota, 420 Delaware Street, S.E., Minneapolis, MN 55455.**

Closing date for application is 15 October 1989. Appointment will occur by 1 July 1990 or as soon as the appointee is available.

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

PHOSPHOLIPID BIOCHEMISTS

POSTGRADUATE RESEARCH BIOCHEMIST position available immediately for NIH-funded studies of phospholipases in heart, liver and tissue culture cells including purification, characterization, regulatory aspects, effects of inhibitors, and metabolism of novel liponucleotide antiretroviral agents. Strong background in phospholipid chemistry and biochemistry required. Send curriculum vitae and names of three references to: **Dr. Karl Y. Hostetler, Department of Medicine (V-111G), University of California, San Diego, La Jolla, CA 92093.** UCSD is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOW

Position available at the National Institute on Alcohol Abuse and Alcoholism, for studies of basic mechanisms of receptor-effector coupling and neuropeptide actions in brain, and the effects of alcohol on these processes. Candidates should have a strong biochemical and/or pharmacological background, working knowledge of basic molecular biological techniques, and some postdoctoral experience. Salary is commensurate with training and experience. Only U.S. citizens or permanent residents are eligible for this position.

Send CV and three letters of recommendation to:

**Dr. P. Hoffman
NIH
Building 10, Room 3C103
9000 Rockville Pike
Bethesda, MD 20892
Telephone (301) 443-5800**



NIH is an Equal Opportunity Employer

TOWSON STATE UNIVERSITY DEAN

College of Natural and Mathematical Sciences

Applications and nominations are invited for the position of Dean of the College of Natural and Mathematical Sciences, beginning July 1990. The Dean is responsible for providing leadership for the departments of Biology, Chemistry, Computer and Information Sciences, Mathematics and Physics. Undergraduate programs are offered in each department; a Master's program is offered in Biology and other Master's programs are under consideration. A successful applicant will have a Ph.D. in a natural or mathematical science, significant experience in higher education administration, including departmental chairmanship, experience in teaching and an established record in scientific scholarship. An application should include a detailed resume, addresses and telephone numbers of 3 to 5 references and a 1 to 2 page statement of the applicant's perception of the role of the Dean of the College at a public, comprehensive university. Candidates should arrange for letters of recommendation to be sent by their references. Nominations should be sent by October 18, 1989 and completed applications by November 1, 1989 to:

**Professor Ali Behrooz
Chair, Search Committee for
Dean of the College of Natural and
Mathematical Sciences
Towson State University
Towson, Maryland 21204**

Towson State University, with a total enrollment of over 15,000 students, is located in a northern suburb of Baltimore, close to the educational, cultural, industrial and recreational opportunities in the Baltimore-Washington area.

(An Equal Opportunity, Affirmative Action Employer)

ASSISTANT/ASSOCIATE SCIENTISTS

PROTEIN CRYSTALLOGRAPHY PROTEIN CHEMISTRY

Hoffmann-La Roche is seeking two scientists to join a dynamic team which utilizes protein structures of cytokines, receptors and HIV proteins for the rational design of novel pharmaceutical agents.

PROTEIN CHEMISTRY

You will become involved with the purification and characterization of recombinant proteins employing techniques such as HPLC, FPLC, gel electrophoresis and enzyme assays.

PROTEIN CRYSTALLOGRAPHY

Your research will include protein characterization, analysis and crystallization, employing your knowledge of basic biochemical techniques such as enzyme assays and gel electrophoresis.

Both position require a BS/MS in
Biochemistry, Chemistry, Biology or a related field.

For confidential consideration, please send your resume, including salary history/requirements, to: **Frances Newman, Department VM, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.** We are an equal opportunity employer.



Hoffmann-La Roche

Working Today For A Healthier Tomorrow

SENIOR NEUROBIOLOGIST/NEUROSCIENTIST

National Institute of Mental Health Intramural Research Program

The NIMH is accepting applications for a senior neurobiologist/neuroscientist with interests in studying basic brain mechanisms of behavior. Applicants must hold a doctoral degree or equivalent and be interested in joining an established research program involving behavioral neurophysiology, neuroanatomy, neuropsychology, developmental neurobiology, neuroethology and other disciplines. The laboratory facilities are located in a rural setting approximately 30 miles west of the main NIH Bethesda campus near the town of Poolesville, Maryland. Researchers in the fields of neurophysiology, neuroanatomy, experimental psychology (including physiological psychology), developmental neurobiology, and related fields in the brain and behavioral sciences are especially encouraged to apply. Excellent facilities exist for primate research. The successful candidate should have broad experience and established credentials in the neurosciences. Duties will include scientific leadership and administration of a laboratory, as well as conduct of an internationally-recognized research program. Salary will be commensurate with other NIMH researchers having similar responsibilities, approximately \$57,158 to \$75,500 plus full Federal benefits. Send C.V., bibliography, a statement of future research directions, and the names of three references to:

Steven M. Paul, M.D.

**Acting Director, Intramural Research Program
National Institute of Mental Health
Building 10, Room 4N-224
9000 Rockville Pike
Bethesda, Maryland 20892**



NIMH IS AN EQUAL OPPORTUNITY EMPLOYER

Biomolecular Discovery Postdoctoral Scientist

Smith Kline and French Laboratories (a division of SmithKline Beecham), has an exciting opportunity for a Postdoctoral Scientist to join its discovery of antimalarial agents research efforts.

The incumbent will conduct research designed to clone and express the *P. falciparum* gene for aphidicolin-sensitive DNA polymerase. In addition, he/she will characterize the recombinant polymerase and help develop a high throughput screen designed to discover selective inhibitors of this enzyme.

The successful candidate will have:

- Ph.D. in a life science.
- Experience in recombinant DNA techniques.
- Experience in molecular genetics of parasites, especially plasmodia or trypanosomes desirable.
- Experience in protein purification desirable.

Our new, state-of-the-art research facility is located in suburban Philadelphia, near Valley Forge. Smith Kline and French provides a stimulating and challenging work environment with opportunity for professional growth. We offer an attractive compensation and benefits package. For confidential consideration, please submit your resume to: N. Hasson, H0114, Smith Kline and French Laboratories, Research & Development, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

SK&F

OPPORTUNITIES FOR RESEARCH SCIENTISTS

The Lovelace Inhalation Toxicology Research Institute is seeking research scientists to join its highly interactive, multidisciplinary team in conducting independent and collaborative research on the health effects of inhaled chemical and radioactive agents. Applicants should have doctoral training in the following disciplines plus rigorous postdoctoral training or equivalent experience.

Molecular Biologist to conduct research on the molecular basis for lung cancer and other health effects of inhaled toxicants. Academic training with emphasis on molecular or cellular biology and postdoctoral training or relevant experience in the molecular basis for abnormalities in mammalian cells required. Interests in carcinogenesis and toxicology preferred.

Pulmonary Pathophysiologist to conduct research on the health effects of inhaled toxicants. Doctoral degree in physiology and interests in respiratory physiology, respiratory function testing, lung function-structure correlates, and acute and chronic physiological responses to inhaled toxicants required. Experience with both human and animal studies preferred.

Toxicologist to conduct research on the toxicology of inhaled toxicants. Doctoral degree in toxicology required. American Board of Toxicology certification desirable. Preferred disciplinary interests include chemical toxicology, radiation toxicology, pharmacokinetics and metabolism.

Competitive salary and fringe benefits. Please send resume and salary requirements to **Personnel Unit, Inhalation Toxicology Research Institute, P.O. Box 5890, Albuquerque, NM 87185**. Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

MOLECULAR PATHOGENESIS JUNIOR OR SENIOR FACULTY

The Department of Microbiology and Immunology in the College of Medicine at The University of Tennessee, Memphis, invites applications for a junior or senior level, tenure-track position focusing on significant problems in microbial pathogenesis using genetic and molecular approaches.

A large Center of Excellence grant has resulted in establishment of a Molecular Resource Center within the Department featuring state-of-the-art facilities for: oligonucleotide synthesis, peptide synthesis, monoclonal antibody production, amino acid analysis, protein sequencing, automated DNA sequencing, polymerase chain reaction, molecular graphics, and flow cytometry. Funds for the initiation of research programs will be available and salaries will be highly competitive.

Applications will be received until 1 October 1989, or until the position is filled thereafter. Applications should consist of curriculum vitae, copies of several recent publications, a brief statement of future research goals, and three letters of reference to be sent to: **Dr. Terrance G. Cooper, Department of Microbiology and Immunology, The University of Tennessee, Memphis, 858 Madison Avenue, Room 801, Memphis, TN 38163.** The University of Tennessee is an Affirmative Action/Equal Opportunity Employer.

PHARMACOLOGY—MOLECULAR PHARMACOLOGY

Applications are invited for tenure-track positions at the assistant or associate member level in the Program of Developmental Therapy and Clinical Investigation of the Sloan-Kettering Institute. Candidates with a Ph.D. or M.D. degree who have demonstrated outstanding research capabilities in cancer-related pharmacology will be considered. We are especially interested in candidates with a strong interest in mechanisms of drug action at the molecular level, and with interests in clinical application. Additional areas of research emphasized include mechanisms of drug resistance, protein structure and drug design, signal transduction and DNA repair. Please send a detailed curriculum vitae and a statement of research interests by 1 November 1989 to: **Dr. Joseph R. Bertino, Program Co-Chairman of Developmental Therapy and Clinical Investigation, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.**

Sloan-Kettering Institute is committed to Equal Opportunity through Affirmative Action and, therefore, members of minority groups are encouraged to apply.

PHYSIOLOGY AND BIOPHYSICS

Two tenure-track positions are available at the Medical College of Ohio in cardiovascular and electrophysiology. Academic rank determined by experience. A doctoral degree and 2 years of postdoctoral research are a minimum. Applicants should send résumé, statement of research goals, and names, addresses, and telephone numbers of three references by 15 November 1989 to: **Dr. William E. Jacobus, Professor and Chairman, Department of Physiology and Biophysics, Medical College of Ohio, P.O. Box 10008, Toledo, OH 43699-0008.** MCO is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOW: MOLECULAR BIOLOGY OF NEURAL INDUCTION. Excellent prospects for beginning a research project aimed at resolving one of the core problems of neurobiology, using molecular biological and immunological methods. Expertise in molecular biology essential. Write: **Marcus Jacobson, Anatomy Department, University of Utah Medical School, Salt Lake City, UT 84132.** Telephone: 801-581-6720. The University of Utah is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL FELLOW— RESEARCH ASSOCIATE

To study the molecular basis of virulence and cytoadherence of *Mycoplasma pneumoniae* and *Mycoplasma genitalium* using genetic-biochemical-immunological approaches. Research strategies include cloning and sequencing of genes, mutant analysis, receptor characterization, generation of synthetic peptides and hybridomas, and other relevant approaches. Mail curriculum vitae and the names of three references to: **Dr. Joel B. Baseman, Professor and Chairman, Department of Microbiology, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78228-7758.** Negotiable starting data and salary. The UTHSCSA is an Affirmative Action/Equal Employment Opportunity Employer.

POSTDOCTORAL FELLOWS

Two NIH-supported positions, available 1 December 1989, for Ph.D.'s in biochemical pharmacology, protein biochemistry, or molecular immunology to study proteolytic catalytic antibodies, including structure, reaction mechanisms, molecular biology, and relationship to disease [*Science* **244**, 1158 (1989)]. Excellent facilities and opportunities to interact with scientists in academia and industry will be available. Send curriculum vitae and telephone numbers of three references to:

Sudhir Paul, Ph.D.

**Department of Pharmacology
42nd & Dewey**

**University of Nebraska Medical Center
Omaha, NE 68105**

Telephone: 402-559-4044

The University of Nebraska Medical Center is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL LANDSCAPE ECOLOGIST

The Institute of Ecosystem Studies seeks a 1- to 2-year postdoctoral associate to document ecological patterns and processes along urban-rural land use gradients. The successful applicant will identify gradients of urbanization using a geographic information system incorporating information from maps, remote imagery, and state and federal databases. The candidate will interact with vegetation and ecosystem ecologists and soil scientists, and contribute to proposal preparation. Annual salary \$21,000. Send statement of research interests, curriculum vitae, and letters of reference by 20 September 1989 to: **Dr. M. J. McDonnell, Institute of Ecosystem Studies, The New York Botanical Garden, Mary Flagler Cary Arboretum, Box AB, Millbrook, NY 12545.** An Equal Opportunity Employer.

POSTDOCTORAL POSITION for study of lipid-protein interactions, transfer of lipids between membranes and proteins, and enzymatic processes, using NMR spectroscopy of different nuclei and 2D-NMR methods. NMR experience preferred. Please send curriculum vitae and three letters of recommendation to: **Dr. James A. Hamilton, Department of Biophysics, Boston University School of Medicine, 80 East Concord Street, Boston, MA 02118.**

California State University, Fullerton, California. **POSTDOCTORAL POSITION** in the Department of Chemistry and Biochemistry. To examine the mechanisms and regulation of receptor-mediated uptake of copper from serum proteins. Project involves binding assays, cell culture, membrane and protein isolation, and molecular biology (RNA). Experience in one or more of these areas required. Salary commensurate with experience. Minimum 2-year commitment, beginning early 1990. Send curriculum vitae and names of three references to: **Dr. Maria C. Linder, Chemistry and Biochemistry, California State University Fullerton, Fullerton, CA 92634.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available at the Northwestern University Cancer Center to work in the area of multi-drug resistance. Candidates should have experience in cell and/or molecular biology. Salary negotiable. Contact: **Dr. Jane Winter, Northwestern University Cancer Center, 303 East Chicago Avenue, Chicago, IL 60611.**

POSITIONS OPEN

POSTDOCTORAL POSITION for studies of the enzymology and biology of 5-methylcytosine, with emphasis on the biological role of the methylation of unusual DNA structures. Experience in the enzymology of nucleic acids and/or the structure of DNA desirable. Excellent and modern facilities for molecular modelling, DNA synthesis, protein sequencing, and molecular cloning are available. Send curriculum vitae to: **Steven S. Smith, Shapiro Research Building, Room S101, City of Hope National Medical Center, 1500 East Duarte Road, Duarte, CA 91010.** Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION

A postdoctoral position is immediately available to study the molecular biology of *Chlamydia trachomatis*. Relevant experience in recombinant DNA, immunology, and pathology is desirable. Send curriculum vitae and names and addresses of three references to: **Luis M. de la Maza, M.D., Ph.D., Professor, Department of Pathology, Medical Sciences I, University of California Irvine, Irvine, CA 92717.** Equal Opportunity Employer.

POSTDOCTORAL POSITION immediately available for recent Ph.D. to study the role of calmodulin and other Ca^{2+} -binding proteins or of phospholipase A_2 in cell functions. Candidates with background in enzymology or protein chemistry are preferred. Salary starts at \$22,000 with excellent benefits. Send curriculum vitae and three letters of recommendation to: **Dr. Wai Yiu Cheung, Department of Biochemistry, St. Jude Children's Research Hospital, Memphis, TN 38101.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION, cell biology biochemistry: Position available immediately for studies of neutrophil stimulus-secretion coupling: GTP-Binding Proteins, subcellular fractionations, surface adhesions. Applicant should hold a Ph.D. Salary: \$30,000 plus benefits. Send résumé to: **Steven Abramson, M.D., Chairman, Department of Rheumatology, Hospital for Joint Diseases, Orthopaedic Institute, 301 East 17th Street, New York, NY 10003.** Equal Opportunity Employer.

POSTDOCTORAL POSITION (ASSISTANT RESEARCH SCIENTIST) available immediately in inhalation toxicology at the Sterling Forest location (Tuxedo, New York) of New York University in the Laboratory of **Dr. M. Amdur**. Individual will work on project examining the pulmonary effects of acid particles. Experience in biochemistry, cell physiology, or molecular biology techniques which may be applied to the study of pulmonary injury preferred. Send résumé and telephone numbers of two references to: **Joan Harmon, Personnel Department, New York University Medical Center, 550 First Avenue, New York, NY 10016.** An Equal Opportunity Employer M/F.

POSTDOCTORAL POSITION (Ph.D. in microbiology, biochemistry, molecular biology, or genetics) in the laboratory of **Ronald Yasbin** is available to study gene regulation in *Bacillus* with special emphasis on the development of strains that have enhanced production of secreted proteins. In addition to the basic molecular biology, this position will also involve interaction with the corporate sponsor of this research. Salary range from low to mid-twenties commensurate with experience. If interested, send curriculum vitae and names of three references by 1 October 1989 to: **Dr. R. Yasbin, Professor and Chair, Department of Biological Sciences, University of Maryland Baltimore County, Baltimore, MD 21228.** UMBC is an Equal Opportunity Employer.

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL RESEARCH SERVICE

POSTDOCTORAL POSITION to study juvenile hormones from plant-parasitic and free-living nematodes and their metabolism. Salary is \$28,852. Send inquiries to: **Dr. David J. Chitwood, Nematology Laboratory, Building 467, BARC-East, Beltsville, MD 20705,** or call: 301-344-3634. An Equal Opportunity Employer. Applications must be marked 9E015.

THE
SCIENCE
RECRUITMENT

"FOUR DAY CLOSE"

**NOW YOU CAN SEE YOUR AD IN SCIENCE
FOUR DAYS AFTER SUBMISSION**

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

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

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

You can call it "INSTANT RECRUITMENT."

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

CURRENT DISTRIBUTION 160,000

**SENIOR PBPK
MODELER**

Design, program, and implement physiologically based pharmacokinetic (PBPK) models of pollutant transport, metabolism, and excretion in humans and animals. Develop detailed models of individual organs and compartments, work with scientists to design experiments to determine model parameters, and investigate the effect of route of exposure on model predictions. This position will work with a multidisciplinary team of environmental science professionals in conducting research and preparing publications.

Successful candidates will possess a Ph.D. in pharmacokinetics or toxicology with a research background in physiologically based pharmacokinetics. Must demonstrate experience in the development of PBPK models, a basic knowledge of physiology, and expertise in using simulation software, such as Simusolv. Good communication and writing skills and the ability to work as part of a team are also required.

Qualified candidates should submit their resume, including salary history and salary requirement, in confidence to:

**Human Resources Department
#4210-63**

**NSI TECHNOLOGY
SERVICES CORPORATION
ENVIRONMENTAL SCIENCES**

**A Subsidiary of ManTech International Corporation
P.O. Box 12313
Research Triangle Park, NC 27709**

EOE



GLAXO INSTITUTE FOR MOLECULAR BIOLOGY S.A.

The Geneva research institute of the largest U.K. pharmaceutical group is recruiting

MOLECULAR BIOLOGISTS

**to investigate
gene regulation in animal cells**

Experience with transcriptional regulation and/or expression of receptor/surface-exposed proteins would be an advantage. Current projects include the study of cytokine receptors and neuropeptide receptors. The ideal candidate will have a PhD plus post-doctoral experience with a proven track record.

The Institute carries out long term research to support areas for discovery of effective new medicines. Publication of appropriate work is actively encouraged. Situated in Geneva, the Institute has an international staff of over one hundred, grouped in teams of specialists from several domains of modern biology. We offer an excellent salary and benefits package as well as an interactive research environment.

If you are interested in this position, please send your *Curriculum vitae* with a list of publications, plus the names of three references to Rita Gloor, Personnel Manager, **Glaxo IMB S.A.**, 46, route des Acacias, 1211 Geneva 24, Switzerland.

DIRECTOR, ATMOSPHERIC CHEMISTRY DIV.

The successful candidate will be responsible for the overall scientific productivity, creativity, and excellence of a National Center for Atmospheric Research division. Specific responsibilities include laboratory management planning, quality maintenance of the scientific and support staff, employee management, and the planning and management of budgets and new funding sources.

Qualifications include a PhD in any of the biological, environmental or physical sciences or an equivalent combination of education and experience. A demonstrated research record of scientific merit, strong leadership skills in developing scientific programs, and demonstrated management and leadership skills in budget development, personnel, program advocacy, and planning are also essential qualifications. Salary range is \$5720-\$8580/month.

Send curriculum vitae and list of publications to: Searl G. Brier, NCAR, P.O. Box 3000, Boulder, Colorado 80307.

NCAR is an AA/EEO Employer. Applications from women, minorities, the disabled, and Vietnam Era and special disabled veterans are encouraged.



National Center for
Atmospheric Research

Two Post Doctoral Positions Available Immediately

First project involves the purification and characterization of active components in the vaccine adjuvant Quil-A for use in second generation ISCOM's, immune-stimulatory complexes (Nature 308: 457-460, [1984]) primarily aimed for subunit HIV vaccines. Successful candidate should be well versed in biochemical separational and structural techniques such as HPLC, NMR and mass spectrometry. A Biophysicist with strong interest in immunology is preferred.

Second project will study changes in tumor-associated cell-surface carbohydrate antigens. Having defined such changes, we are now attempting purification, cloning and sequencing of the glycosyltransferases responsible for the observed changes. Successful candidate should have strong interest in tumor biology and experience with transfection, molecular cloning and sequencing techniques.

Interested candidates should submit curriculum vitae, a concise statement of research interests (including position preference) and the names and telephone numbers of three references to: **Jan Thurin, M.D., The Wistar Institute, 36th & Spruce Streets, Philadelphia, PA 19104.** Equal opportunity employer, M/F.

THE
WISTAR
INSTITUTE



QUEEN'S UNIVERSITY
KINGSTON, ONTARIO, CANADA

RESEARCH BIOCHEMIST, MOLECULAR/ CELLULAR BIOLOGISTS, PhD

Queen's University, assisted by a new funding initiative from the Heart & Stroke Foundation of Ontario, is planning to substantially expand its existing program in hemostasis/thrombosis in the Faculty of Medicine. At least two, and possibly three, positions are available. The overall theme of the program is "The Regulation of Hemostasis in Health and Disease." The activities of the program currently range from the use of carefully characterized whole animal models to the analytical biochemistry of the hemostatic system. We now wish to recruit basic scientists with interests in the molecular/cellular biologic aspects of the theme of the program. The Faculty of Medicine is currently committed to developing areas of excellence and providing integration of intellectual and physical resources.

The primary appointment will be in the Department of Pathology, although cross-appointments in other departments, for example Biochemistry, will be available for appropriately qualified candidates. Although primarily research in nature, some participation in the teaching program will be expected in the area appropriate to the applicant's expertise. The positions will likely be at the Assistant Professorship level but this is negotiable depending on previous experience.

It is expected that at least one of the applicants will establish independent research activities relating to the biochemistry or molecular/cellular biology of fibrinolysis. The successful applicants should have demonstrated a high level of productivity and potential for establishing an independent program of research in their chosen area of activity. Major emphasis will be placed on evidence that an individual's area of interest will integrate with existing programmatic activities.

In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens or permanent residents. Candidates of either sex are equally encouraged to apply.

Applications with curriculum vitae or inquiries should be directed no later than October 31, 1989 to:

Dr. Alan R. Giles
Department of Pathology
Queen's University
Kingston, Ontario, Canada
K7L 3N6
Telephone (613) 545-6342

BUILDING A NEW LAB?

LET THE SCIENCE FREE PRODUCT
INFORMATION SERVICE PUT YOU IN
TOUCH WITH THE VENDORS WHOSE
PRODUCTS YOU WILL NEED.

SIMPLY WRITE US A LETTER STATING
THE SPECIFICS ABOUT YOUR PROPOSED
LAB AND WE WILL DO THE REST.

WRITE TO:

SCIENCE MAGAZINE
NEW LAB SERVICE DEPT.
1515 BROADWAY
NEW YORK, N.Y. 10036

**Tenure-Track Faculty Positions
in Molecular Biology**

Applications are invited for two positions of Assistant Professor (tenure track in the Faculty of Medicine, University of Manitoba). Successful candidates are expected to establish an outstanding independent research program in the area of molecular biology as part of an Oncology group studying malignant progression. The positions require only minimal departmental teaching responsibilities. Requirements include a Ph.D. in Biochemistry or a related field, or an M.D., with at least two years of Postdoctoral experience. Candidates with a strong research background in the structure and function of oncogenes, growth factors or gene regulation are preferred. Applicants must have obtained a significant publication record in peer-reviewed journals.

Appointment at the Associate Professor level (tenured) may be considered for applicants who have demonstrated distinction in research and grant support.

Applicants should send a curriculum vitae, three significant reprints, an outline of research plans, and the names of three references to:

Dr. A.H. Greenberg, Manitoba Institute of Cell Biology,
100 Olivia Street, Winnipeg, Manitoba Canada R3E 0V9.

Deadline for receipt of applications is October 31, 1989.

Both men and women are encouraged to apply. In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents, although all are encouraged to apply.

**Manitoba Institute
of Cell Biology**

**RESEARCH
SCIENTIST
PROTEIN
PURIFICATION**

Amgen is a recognized leader in the discovery and development of human therapeutic products through applied biotechnology. Our Recovery Process Development Group has positions for Ph.D. Scientists skilled in the recovery of recombinant proteins.

Qualified candidates should have experience in protein folding, chromatography and standard analytical techniques.

Amgen offers an excellent compensation and benefits package as well as the unique opportunity to contribute to significant research programs on the leading edge of biotechnology. If you have the necessary qualifications and would like to be a part of a company that places a high priority on its human resources, please send a complete C.V., in confidence, to:

AMGEN, INC.
Recruitment Dept. #424
Amgen Center
Thousand Oaks
CA 91320-1789

Equal
Opportunity
Employer

AMGEN

**SCIENCE
BONUS DISTRIBUTION**

at the annual meeting of the

SOCIETY FOR NEUROSCIENCE

(Oct 30–Nov 2 Phoenix, AZ)

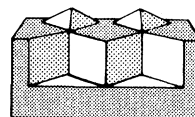
Issue Date: October 6, 1989

SPECIAL RECRUITMENT CLOSING DATE:

SEPTEMBER 18, 1989

(Camera Ready Advertising Only)

Call: Gwen Canter (212) 730-1050



The Mount Sinai Medical Center of New York

Nuclear Medicine Physician

The Andre Meyer Department of Physics-Nuclear Medicine at the Mount Sinai Medical Center, New York is seeking an experienced Board-certified nuclear medicine physician to participate in the department's programs including clinical practice, resident and postgraduate training and research. A PET center is in development and programs exist in radiochemistry, computers, labeled blood elements, bone densitometry, neuro, cardiac, bone and tumor imaging. Send c.v. and letter of interest to Stanley J. Goldsmith, MD, Director, Department of Physics-Nuclear Medicine, Box 1141, The Mount Sinai Medical Center, One Gustave L. Levy Place, New York, NY 10029-6574. An Equal Opportunity Employer.

MOUNT SINAI.
TAKE GOOD CARE OF YOUR CAREER.

POSITIONS OPEN

POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY

Position is open fall 1989 to study the cell division gene cycle of *Caulobacter crescentus* and the regulation of flagellar gene transcription during cell differentiation. Experience in molecular biology and biochemistry will be useful. Address inquiries with curriculum vitae and names of three references to: **Dr. Austin Newton**, Program in Molecular Biology, Lewis Thomas Laboratory, Department of Biology, Princeton University, Princeton, NJ 08544.

An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION AVAILABLE

Molecular biology of ion transport in vascular smooth muscle. Studies on both message and protein expression control will interface with cultured cell proliferation. NIH salary level. Some experience in molecular biology techniques preferred. Send curriculum vitae and three reference letters to: **Dr. Julius C. Allen**, Section of Cardiovascular Sciences, Department of Medicine, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030.

POSTDOCTORAL POSITION available immediately to study EMC virus-induced diabetes. Projects include site directed mutagenesis and construction of recombinant DNA molecules. Preference to recent Ph.D. experienced in cloning. Starting salary \$24,000. Send curriculum vitae and names of three references to: **George W. Jordan, M.D.**, Division of Infectious Diseases, University of California, Davis, School of Medicine, 4301 "X" Street, Sacramento, CA 95817. *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION—VIROLOGY/ VIRUS RECEPTORS/MOLECULAR IMMUNOLOGY. Position available in Department of Medicine, Harvard Medical School/Dana-Farber Cancer Institute. Available immediately or as late as 1 January 1990 for dynamic individual. Salary negotiable. Interested applicants should send curriculum vitae, description of research background, and names/addresses of references to: **Joyce D. Fingerroth, M.D.**, Dana-Farber Cancer Institute, 44 Binney Street J424, Boston, MA 02115.

POSTDOCTORAL RESEARCH ASSOCIATE to apply recombinant DNA technology to understand the role of a protein involved in microbial infection in humans. Competitive salary commensurate with experience. Send curriculum vitae and at least three references to: **Director, The Ohio State Biotechnology Center**, The Ohio State University, Rightmire Hall, 1060 Carmack Road, Columbus, OH 43210. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE position with NIEHS Marine/Freshwater Biomedical Center to study chemical carcinogenesis in trout and other fish. Projects include histopathology, histochemistry, and ultrastructure of neoplasia in fish. Closing date: 15 October 1989. Send résumé, transcripts and three letters of recommendation to: **Dr. Jerry Hendricks**, Marine/Freshwater Biomedical Center, Wiegand Hall, Oregon State University, Corvallis, OR 97339. *OSU is an Affirmative Action/Equal Opportunity Employer and complies with section 504 of the Rehabilitation Act of 1973.*

POSTDOCTORAL RESEARCH ASSOCIATE MOLECULAR ANALYSIS OF POPULATIONS

A position is available starting immediately involving a molecular analysis of two populations of the marine bivalves. The project involves the generation of recombinant DNA libraries and the identification of restriction fragment length polymorphisms (RFLPs) that can be used to analyze the populations in zones of convergence. Background experience in nucleic acid technology and/or population genetics is preferred. Further details may be obtained from either: **Dr. Thomas J. Hilbish** (803-777-6629), or **Dr. Richard M. Showman** (803-777-2457), Department of Biological Sciences, University of South Carolina, Columbia, SC 29208.

U.S.C. Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

Position available for minimum of 1 year to study mammalian mitochondrial biogenesis and the role of DNA topoisomerases in this process. Project involves enzymologic and molecular biologic approaches so experience in recombinant DNA and/or protein biochemistry techniques is desirable. Send curriculum vitae and names of three references to:

Dr. Frank J. Castora
Department of Biochemistry
Eastern Virginia Medical School
700 Olney Road
Norfolk, VA 23501

Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH POSITION

Participate in ongoing research into (i) the biochemical mechanisms of transformation by DNA tumor viruses and (ii) the function of cellular proto-oncogenes (c-src and c-fyn) and their activated counterparts. Studies will examine the action of these proteins in signal transduction and cell proliferation (*Cell* 49, 75; *Mol. Cell. Biol.* 8, 1736; *EMBO J.* 7, 3845). Applications are invited from highly motivated individuals with training in molecular and cellular biology. Duration of appointment is expected to be 2 years. Please send curriculum vitae, a short summary of research interests, and names of three references to either: **Dr. Alan E. Smith** or **Dr. Seng H. Cheng**, Department SC91, Genzyme Corporation, One Mountain Road, Framingham, MA 01701.

An Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE OR ASSISTANT PROFESSOR position available immediately for a neurophysiologist with experience in chronic unit recordings in freely moving animals (preferably rodents). Position funded for 3 years. Opportunities exist to do own work part-time, for switch to tenure-track, and for position for spouse. Salary range is \$25,000 to \$30,000+ depending upon experience. Send curriculum vitae and names of three references to: **G. Vogel**, Emory University Sleep Laboratory, GMHL, 1256 Briarcliff Road, Atlanta, GA 30322. Call: 404-894-5900. *Emory University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATES

Positions are available to study the molecular basis of alterations in mammalian topoisomerase II associated with multidrug resistance or the molecular genetics of pyrimidine enzyme deficiency associated with hereditary orotic aciduria. Experience in molecular biology is preferred. Starting salary from \$22,000. To apply, send curriculum vitae and names and addresses of three references to: **Dr. D. Parker Suttle**, Department of Biochemical and Clinical Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH POSITION.

One position is available to join a laboratory using transgenic animals to investigate the role of the major histocompatibility complex in human disease. Experience in experimental pathology, molecular biology, and/or cellular immunology required. Send curriculum vitae, bibliography, and names of three references to: **Joel D. Taurog, M.D.**, Department of Internal Medicine, University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75235-8884. *Equal Opportunity Employer.*

POSTGRADUATE POSITION at Pittsburgh Energy Technology Center—Activities in project management, control, and planning, which include monitoring of project deliverables, recommending technical direction for contract research, and suggesting activities in the bioprocessing/biodesulfurization of coal. A background in microbiology and/or chemistry would be helpful. A graduate degree within last 3 years is required as is U.S. citizenship or PRA status. Contact: **Fossil Energy Postgraduate Program**, Science/Engineering Education Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117. Telephone: 615-576-3456 or 412-892-4638.

POSITIONS OPEN

PROGRAM IN SOCIAL ECOLOGY ASSISTANT PROFESSOR—CRIMINOLOGY/LAW AND SOCIETY

The program in Social Ecology, University of California, Irvine, has an opening at the assistant professor level for a person with research/teaching commitments in the area of the ecology of crime and delinquency. There is particular interest in recruiting a person who studies the development of criminal behavior or efforts to correct criminal behavior in terms of such factors as spatial arrangements, the physical environment and public policies related to it, population density, demographic change, and geography. Salary and benefits are comparable to those at the very best research universities, as are the expectations for scholarly productivity.

Recruitment is for the subunit within the Program in Social Ecology entitled Criminology, Law and Society. There are nine faculty members in that subunit, with backgrounds in sociology, psychology, and planning, and four have J.D.'s in addition to Ph.D.'s. The Program in Social Ecology is an interdisciplinary academic unit that grants B.A., M.A., and Ph.D. degrees.

Candidates should submit a brief letter, curriculum vitae, and a list of referees to:

**Chair, Search Committee
for Criminology, Law and Society
Program in Social Ecology
University of California
Irvine, CA 92717**

Closing date for applications is 15 December 1989. *The University of California is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates encouraged to apply.*

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE SOUTHERN FOREST EXPERIMENT STATION

PROJECT LEADER/SUPERVISORY RESEARCH ENTOMOLOGIST, RESEARCH FORESTER, RESEARCH ECOLOGIST, RESEARCH BIOLOGIST. USDA-FS, Southern Forest Experiment Station, is seeking a research entomologist, research forester, research ecologist, or research biologist to lead a team of researchers studying the population dynamics and interactions of the southern pine beetle, host trees, and stands to improve management of the pest and to develop practical means of control. Salary range is GM-13-15 (\$41,121 to \$57,158). Information concerning the position may be obtained from: **Personnel Management, Room T-10210, USPSB, 701 Loyola Avenue, New Orleans, LA 70113. Telephone: 504-589-3921.** *The USDA is an Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATES

Five positions available this fall for a multidisciplinary approach to study peptides and proteins for biological and clinical applications. Candidates should have experience in one of the following areas: (i) peptide synthesis, (ii) immunology, (iii) cell biology, (iv) HIV, (v) blood coagulation, and (vi) growth factors. Send curriculum vitae and names or letters of two references to: **Dr. James P. Tam**, Rockefeller University, 1230 York Avenue, New York, NY 10021. *An Equal Opportunity Employer.*

RESEARCH ASSOCIATE: Perform experimental research on the mechanisms by which insulin regulates gene expression and study the role of insulin as a growth factor with special reference to its interaction with proto-oncogenes in regulation of cell division and differentiation using recombinant DNA technology and flow cytometry and using knowledge of molecular endocrinology, hormone processing and binding, isolation and measurement of DNA and RNA, gel electrophoresis and spectrophotometry, and in vitro assay of enzyme activities. Ph.D. in physiology with emphasis on in vitro regulation of insulin biosynthesis, processing and secretion plus 2 years of experience in the job offered or 3 years experience as researcher involved in regulation of insulin synthesis and secretion using above knowledge required. Forty hours per week; \$25,100 per year. Send résumé to: **New York State Job Service, 677 South Salina Street, Syracuse, NY 13202. Attention: Interviewer #51, Job order #NY0004640.**

BIOCHEMIST/ ENZYMOLOGIST

FMC Corporation, a Fortune 150 leader in Agricultural Chemical R&D, is seeking a Ph.D. Biochemist/Enzymologist to join the research team in the discovery of insecticides.

Working closely with Chemists and Biologists/Entomologists, the position is responsible for the design and implementation of enzyme inhibitor assays. The successful candidate will have the ability to generate new ideas, to define projects, and to supervise their implementation. The candidate will have the opportunity to present the work to others. Superior written communication and interpersonal skills would be expected.

Post-doctoral experience or equivalent is required, and a background in insect physiology and/or toxicology would be preferred.

FMC offers a professional environment and state of the art equipment at its Princeton location. Salary commensurate with experience, excellent benefits. Please send resume to **Mary Stark, FMC Corporation, Chemical R&D Center, Dept. 89-24, Box 8, Princeton, NJ 08543**. Equal Oppty Employer, M/F. Females are encouraged to apply.

FMC[®]

BUILDING A NEW LAB?

LET THE SCIENCE FREE PRODUCT
INFORMATION SERVICE PUT YOU IN
TOUCH WITH THE VENDORS WHOSE
PRODUCTS YOU WILL NEED.

SIMPLY WRITE US A LETTER STATING
THE SPECIFICS ABOUT YOUR PROPOSED
LAB AND WE WILL DO THE REST.

WRITE TO:

SCIENCE MAGAZINE
NEW LAB SERVICE DEPT.
1515 BROADWAY
NEW YORK, N.Y. 10036



Postdoctoral Positions Scientists

CIBA-GEIGY Pharmaceuticals Division—respected worldwide for innovative products to treat cardiovascular, inflammation and other disorders—invests more than a million dollars a day in research. We have three postdoctoral positions at our 100-acre headquarters complex in Summit, New Jersey for scientists with the following credentials:

Atherosclerosis Drug Research

Our Atherosclerosis Biochemistry Department requires experience in molecular biochemistry and recombinant DNA techniques. Interest in protein expression and characterization preferred. Research focus is on applying molecular biology techniques to discovery of drugs to treat and prevent hyperlipidemia and atherosclerosis. Respond to Dept. PJG.

Biochemistry Research

Our Biochemistry Department requires a PhD in Pharmacology, Biochemistry or Immunology, with experience in radioligand binding techniques and interest in receptor mechanisms. Focus is on improved understanding of interactions between transmitter systems at the receptor level—especially investigating specific interactions between the immune and nervous systems at the level of the receptor and the regulation of these events. Respond to Dept. PDS.

Enzyme Kinetics Research

Our Enzymology Department requires a PhD in Molecular Biology, or Biochemistry with experience in enzyme kinetics. Will conduct research to isolate enzymes and to apply sophisticated kinetic and molecular approaches to delineate structure-function relationships. Will implement assays, study kinetic properties and define enzyme isoforms. Respond to Dept. PLW.

We offer competitive salaries, excellent benefits and opportunities for advancement. For consideration, please send resume with salary history, indicating department code, to: **Staffing Center, CIBA-GEIGY Corporation, Pharmaceuticals Division, 556 Morris Avenue, Summit, New Jersey 07901**. We Are An Equal Opportunity Employer M/F/H/V.

Science Serving Mankind

CIBA—GEIGY

POSITIONS OPEN

RESEARCH ASSISTANT/ASSOCIATE

A position is available immediately for work on a centralized computer database for thermodynamic data on lipid phase transitions and miscibility. Requirements include superior programming expertise, a solid understanding of lipid/liquid crystal poly-/mesomorphism and phase science, and an interest in tabular and graphical databases and database management. A Ph.D. in biochemistry, chemistry, materials science, or related field desirable but not required. Applicants should submit curriculum vitae and a letter describing how past experience would relate to project goals and arrange for two letters of recommendation to be sent to: **Professor M. Caffrey, Department of Chemistry, The Ohio State University, 120 West 18th Avenue, Columbus, OH 43210. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSISTANT PROFESSOR. The Cancer Center and the Department of Pharmacology at the University of Maryland at Baltimore invite applications for a research-track position in the area of molecular pharmacology/biochemistry. Applicants must show evidence of successful research accomplishments and be trained in molecular biology and biochemistry. Establishment of a rigorous research program to study mechanisms of resistance to relevant anticancer drugs is expected. Applicants should send a complete curriculum vitae, a statement of research interests, and names and addresses of three references to: **Chief, Cell and Molecular Biology Division, University of Maryland Cancer Center, 22 South Greene Street, Baltimore, MD 21201.**

RETINAL DEVELOPMENTAL NEUROBIOLOGISTS

The Lions' Sight Centre at The University of Calgary Faculty of Medicine offers one or more full-time positions in Cellular or Molecular Developmental Neurobiology of the Vertebrate Retina. Candidate(s) should have a Ph.D. or M.D. with equivalent research training; at least 2 years postdoctoral experience; and an established record of productive and fundable research in cellular, biochemical, or molecular biology of retinal development, cell culture, transplantation, or regeneration.

A renewable 5-year Scholar appointment will be available on successful application to the Alberta Heritage Foundation for Medical Research and/or the Medical Research Council of Canada. Salary and academic rank will be commensurate with experience.

The successful candidate(s) will hold a faculty appointment in an appropriate department and will be affiliated with the Lions' Sight Centre and the Neuroscience Research Group. Interdisciplinary collaborations will be encouraged, and 75% of time will be protected for research.

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The University of Calgary has an Employment Equity Program and encourages applications from all qualified candidates, including women, aboriginal people, visible minorities, and people with disabilities.

Please send curriculum vitae, summary of research interests, and names of three references by 15 October 1989 to:

Dr. W. K. Stell
Director, Lions' Sight Centre
The University of Calgary
3330 Hospital Drive N.W.
Calgary, Alberta T2N 4N1



SCIENCE TEST SPECIALISTS

BIOLOGY TEST SPECIALISTS—Anatomy, physiology, cellular biology, microbiology, or other human/animal biological science.

CHEMISTRY TEST SPECIALIST—Chemistry, biochemistry, pharmacy, or related field.

Work involves evaluating, editing, and rewriting test items and writing support materials for college-level tests. Need master's degree and 2 years of college-level teaching, writing, or equivalent. Starting salary \$20's annually. Excellent benefits; moving expenses paid. Submit letter of application and résumé to: **Personnel Services (S), ACT National Office, P.O. Box 168, Iowa City, IA 52243. American College Testing (ACT) is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

RESEARCH ASSOCIATE (ANATOMY AND CELL BIOLOGY DEPARTMENT) for university in SW Ohio to conduct research, analysis and experimentation in genetic engineering using DNA purification, labeling and hybridization for purposes of targeted insertion of defined mutations into cloned genes and subsequent introduction into recipient mammalian cells by DNA transfection methods. Monitor gene expression of these mutations. Develop original research experiments and sophisticated theoretical calculations. Prepare technical reports and compile research results for publication. Requires Ph.D. in molecular biology or microbiology and 2 years of experience in job described or 2 years of research experience in computer analysis and classification of DNA, DNA cloning and recombination, and DNA-sequencing techniques; prior experience must include 1 year of experience programming in Basic software language. Forty hours per week, 9:00 a.m. to 6:00 p.m., \$10.30 per hour. Qualified applicants send résumé (no calls) to: **C. Bussard, JO#1099647, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

UNIVERSITY OF PENNSYLVANIA DEPARTMENT OF CHEMISTRY

As a part of a continuing development program, the Department of Chemistry at University of Pennsylvania plans to make a **SENIOR APPOINTMENT** in the area of organic chemistry. While all areas will be considered, candidates in the area of complex molecule synthesis as applied to the biomedical sciences would most complement the current faculty.

In addition, the Department plans to add three faculty members at the **ASSISTANT PROFESSOR** (tenure probationary) level beginning July 1990. The general areas of research are organic, inorganic, and materials chemistry. Although all areas will again be considered, candidates in the areas of complex molecule synthesis, bioorganic, bioinorganic, organometallic, polymer, and organic solid-state chemistry would most complement the current faculty. All applicants should send curriculum vitae, list of publications, and a description of research interests to: **Amos B. Smith, III, Chairman, Department of Chemistry, University of Pennsylvania, Philadelphia, PA 19104-6323** by 15 October 1989. In addition, assistant professor candidates should arrange for three letters of recommendation to be forwarded to the above address. *The University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer.*

THEORETICAL POPULATION ECOLOGIST—The Department of Biological Sciences, University of California, Santa Barbara, invites applications for a tenure-track position at the assistant professor level in theoretical population ecology, effective 1 July 1990. Applicants should combine an exceptional and broad background in mathematics appropriate to modeling ecological systems with demonstrated ability to apply these techniques with good biological insight. Ph.D. normally required by time of appointment. The successful candidate will be expected to establish a strong research program, to develop an undergraduate and a graduate course in theoretical population ecology, and to participate where appropriate in other aspects of the department's teaching. The department has a strong and diverse group of population biologists, and evidence that the candidate has a desire and ability to interact and collaborate with other faculty will be an advantage. Candidates with postdoctoral experience will be given preference. Interested individuals should send a copy of their curriculum vitae, a summary of their research goals, and the names of four referees to: **The Chairman, Department of Biological Sciences, University of California, Santa Barbara, CA 93106** by 1 October 1989. *The University of California is an Equal Opportunity/Affirmative Action Employer. Proof of U.S. citizenship or eligibility for U.S. employment will be required prior to employment (Immigration Reform and Control Act of 1986).*

POSITIONS OPEN

STAFF SCIENTIST

Study Director for Environmental Fate Studies. Design and perform experiments in microbiometabolism and chemical degradation of pesticides in soil and water using ¹⁴C radiolabeled compounds. Isolate and purify metabolites and degradates and identify them using TLC, GC, and HPLC. Model the fate of pesticides in the environment using mathematical models. Prepare protocols, evaluate research data and review reports. Prepare manuscripts for publication. Supervise four technical staff in development of research procedures, and train junior staff. Ph.D. in soil chemistry and 6 months of postdoctoral training in environmental fate-pesticides; and 3 years of experience in environmental fate of pesticides; and at least two publications on environmental fate of pesticides. \$16.35 per hour, 40 hours per week. Résumé to: **Carlyn Waller, Job Service, 206 North Broom, Box 7163, Madison, WI 53707. Employer Paid Ad.**

TECHNICAL EDITOR/PRINT MEDIA SPECIALIST—RADIATION EFFECTS RESEARCH FOUNDATION, HIROSHIMA, JAPAN. Requires extensive experience editing technical manuscripts for consistency in English-language usage and general scientific report format. Previous experience in copywriting for, and coordination of the regular production of public relations, print media, such as newsletters and brochures, is essential. Knowledge of word processing is necessary; some experience with database manuscript monitoring and desktop publishing is also recommended. Previous supervisory experience desirable. Visiting professional staff at RERF are employees of the U.S. National Academy of Sciences (NAS) and are paid salaries commensurate with their experience. Compensation provided for overseas employment commensurate with State Department guidelines. Interested persons should direct inquiries or applications, including an updated curriculum vitae, to: **Director, National Academy Press, National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, DC 20418. RERF/NAS are Equal Opportunity Employers.**

Search extended. The Department of Biology of The College of Staten Island of the City University of New York seeks candidates for a full-time **TENURE-TRACK POSITION**. Preferred areas of research are microbiology or immunology or biochemistry. Ph.D. and postdoctoral experience required. Teaching experience and grant activity desirable. The Department participates in the CUNY doctoral program in biology. Salary and rank commensurate with experience, background and professional qualifications to start September 1990. Send curriculum vitae and names of three references by 1 November 1989 to: **Dr. Jacqueline LeBlanc, Chairperson, Department of Biology, The College of Staten Island/CUNY, 715 Ocean Terrace, Staten Island, NY 10301.**

Equal Opportunity/Affirmative Action Employer.

VICE PRESIDENT FOR ACADEMIC AFFAIRS MONTANA STATE UNIVERSITY

Nominations and applications are invited for an innovative administrator capable of providing leadership and vision. Salary: Negotiable, depending upon qualifications and experience. Starting date: 1 July 1990. Required qualifications: terminal degree; record of excellence in teaching, research, creative activity or other significant professional achievement; record of experience in leadership and administration; evidence of strong advocacy and leadership in promoting a quality intellectual environment; record of sensitivity to a variety of disciplines.

Nominations should be received by 15 October 1989. Applications should be postmarked by 15 November for inclusion in the first review. For application information and list of preferred qualifications, contact: **Vice President for Academic Affairs Search Committee, 207 Montana Hall, Montana State University, Bozeman, MT 59717-0001. Telephone: 406-994-4371. MSU, an Equal Opportunity/Affirmative Action Employer and Educational Institution, actively solicits applications from minorities and women.**

ALKERMES, Inc. is a private biomedical company focused on the development of innovative systems for drug delivery across the blood-brain barrier. We seek well-qualified scientists to address new product development. We have the following position available:

Biochemist/ Cell Biologist

Seeking a B.S./M.S. level candidate with a strong background in the biological sciences and significant experience in a research laboratory. Familiarity with mammalian tissue culture, immunological methods, and analytical biochemical techniques would be advantageous.

We offer a competitive salary, excellent benefits package, and a stimulating work environment. If you are interested in being a major contributor to our success, please send your CV, including references, and a statement of interest in confidence to: **Diane M. Walsh, Assistant to the President, Alkermes, Inc., 26 Landsdowne Street, Cambridge, MA 02139.** An Equal Opportunity Employer.

Cardiovascular Pharmacologist

Parke-Davis Pharmaceutical Research Division, Warner-Lambert Company, is seeking a self-motivated, innovative scientist to actively participate in collaborative, multi-disciplinary research on novel treatments of cardiovascular diseases in the Pharmacology Department at their PHARMACEUTICAL RESEARCH FACILITY IN ANN ARBOR, MICHIGAN.

The position requires:

- BS/MS in biology, pharmacology, physiology or related field
- Experience in vascular muscle physiology, pharmacology and biochemistry desirable, including skills in isolated organ bath assays, biochemical assays, radioimmunoassay
- Excellent written and oral communication skills
- Outstanding ability to work as part of a team effort

Employment will be at our modern facilities adjacent to The University of Michigan campus. Interested, qualified applicants should send curriculum vitae and salary requirements, in confidence to: **Mr. William Burmeister, Human Resources Representative, PARKE-DAVIS, 2800 Plymouth Road, Ann Arbor, Michigan 48105.** "Smoke-Free Work Environment"



PARKE-DAVIS
DIVISION OF WARNER LAMBERT COMPANY

"Equal Opportunity in Action"

CELLULAR- MOLECULAR BIOLOGY SUPERVISOR

The Lovelace Inhalation Toxicology Research Institute is seeking a scientist to supervise a research group and conduct independent and collaborative research on the molecular basis for lung cancer and other health effects of inhaled chemical and radioactive agents. Doctoral degree, extensive post-graduate training and research experience and an established publication record in the areas of molecular and cellular biology with emphasis on mechanisms of carcinogenesis necessary. University and cancer center collaboration possible. Competitive salary and fringe benefits. Please send resume and salary requirements to **Personnel Unit, Inhalation Toxicology Research Institute, P.O. Box 5890, Albuquerque, NM 87185.** Equal Opportunity/Affirmative Action Employer

BROOKHAVEN NATIONAL LABORATORY

Chair, National Synchrotron Light Source Department

Brookhaven National Laboratory is a multidisciplinary Laboratory that carries out basic and applied research. We are managed by Associated Universities, Inc. under contract with the U.S. Department of Energy. We are presently seeking a distinguished scientist to service as Chair of the National Synchrotron Light Source (NSLS) Department.

As the brightest synchrotron light source in the world, the NSLS draws an international community of more than 1,000 scientists from 163 institutions to perform experiments. They carry out a wide range of innovative research in physics, chemistry, biology, materials sciences and various technologies.

Among the responsibilities of the NSLS Chairperson are to continue to build participation and commitment of the outside research community, to integrate the NSLS program with those of the BNL Research Departments, to ensure that the experimental capabilities at the NSLS are the best available and to plan for and carry out further development of the facility. One of the challenging ongoing commitments for the NSLS is a five-year project to construct a compact synchrotron for x-ray lithography.

Candidates should have a doctorate in physics, materials science or chemistry with extensive experience coupled with strong proven managerial capabilities and be a recognized authority in his or her field. We are looking for an able leader with strengths in dealing with university and industrial leaders.

Brookhaven is situated on 5,000 acres in the heart of a region where numerous electronic and other technological companies have made their base. Applications and nominations should be sent by October 8, 1989 to Dr. J.D. Axe, Vice Chair, NSLS Search Committee, Bldg. 510A, Brookhaven National Laboratory, Associated Universities, Inc., Upton, NY 11973. Equal Opportunity Employer m/f.

bnl BROOKHAVEN
NATIONAL LABORATORY
ASSOCIATED UNIVERSITIES INC.

POSITIONS OPEN

TRANSGENIC MOUSE COLONY: A faculty position is available immediately for a qualified investigator to lead a transgenic mouse research and developmental program. The primary intent is to develop *in vivo* models for studying the microvascular complications of diabetes. Candidates must have experience in all aspects of transgene manipulations and a strong background in molecular biology. Although experience in diabetes-related research is an asset, it is not necessary.

The Whittier Institute for Diabetes and Endocrinology is a nonprofit research institute that has a solid foundation for basic research in islet transplantation, in studies on CNS and pituitary function, in reproductive biology, growth factor biochemistry and in angiogenesis. Send curriculum vitae with a brief statement of career goals to:

Andrew Baird
Chairman, Transgenic Core Search Committee
The Whittier Institute
9894 Genesee Avenue
La Jolla, CA 92037

VERTEBRATE BIOLOGIST, assistant/associate professor, tenure-track, start January/August 1990. To teach anatomy/physiology and advanced course(s) in own specialty area. Earned Ph.D. and ongoing research required. Postdoctoral research and teaching experience desired. Send curriculum vitae and three letters of reference to: **Search Committee, Biology Department, Purdue University Calumet, Hammond, IN 46323.** *Purdue Calumet is an Affirmative Action/Equal Employment Opportunity University.* For full consideration applications should be submitted by 13 October 1989.

WATER QUALITY SCIENTIST/ENGINEER. Senior position; project management and technical report experience, Ph.D. or equivalent. Challenging applied projects for leading environmental science firm: oceanography, estuarine science, urban runoff, oil spills, waste discharges, environmental chemistry, and toxicity. **Kinetic Laboratories, Inc., P.O. Box 1040, Santa Cruz, CA 95061 or 403 West 8th Avenue, Anchorage, AK 99501.**

CONFERENCE

**FIRST INTERNATIONAL CONFERENCE
ON HUMAN ANTIBODIES
AND HYBRIDOMAS**
18-20 April 1990
Orlando (Lake Buena Vista), Florida
Program Chairman: **Mark C. Glassy, Ph.D.,**
Biotechnetics

The Scientific program will consist of keynote lectures by invited speakers, contributed papers, and poster presentations emphasizing all aspects of human hybridoma and antibody technology, including fundamental research, applied science, and clinical applications.

Deadline for abstracts: 15 October 1989.

Contact: **S. L. Petterson, Butterworths, 80 Montvale Avenue, Stoneham, MA 02180.** Telephone: 617-438-8464, extension 234 or 242.

TRAINEESHIP

PHARMACOKINETICS: NIEHS TOXICOLOGY TRAINEESHIP POSTDOCTORAL POSITION available for U.S. citizen or persons with permanent visa. Individuals with a recent Ph.D. in pharmacokinetics, applied mathematics or statistics with an interest in biomedical applications should apply. Work will involve modeling percutaneous drug and xenobiotic absorption in a novel isolated perfused skin preparation and deriving physiological pharmacokinetic models of the disposition of toxic drugs and chemicals. The appointment is renewable annually for a maximum of 3 years, with a minimum starting salary of \$15,996. Available immediately. Send résumé and three letters of reference to: **Dr. J. E. Riviere, Laboratory of Toxicokinetics, College of Veterinary Medicine, North Carolina State University, Raleigh, NC 27606.** Telephone: 919-829-4200.

POSITIONS OPEN

VIROLOGIST/IMMUNOLOGIST ASSISTANT PROFESSOR

Tenure-track position is available in the Department of Medical Microbiology and Immunology, Ohio State University College of Medicine, for either a retrovirologist, viral immunologist interested in neurological disease, or neuroimmunologist. Opportunities exist to collaborate closely with other groups involved in viral immunology, molecular virology, retrovirology, and neuroimmunology. The OSU Medical Center is one of the designated AIDS Clinical Trials Groups. Applicant should hold M.D. or Ph.D. degree, have at least 2 years of postdoctoral experience, and have a strong record of scholarly achievement. The candidate will be expected to establish an active research program and participate in medical and graduate student teaching programs. Send curriculum vitae, a summary of research interests, and three letters of recommendation by 1 January 1990, to: **Caroline Whitacre, Ph.D., Chair of Search Committee, Department of Medical Microbiology and Immunology, The Ohio State University College of Medicine, 333 West 10th Avenue, Columbus, OH 43210.** Telephone: 614-292-5525.

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

FELLOWSHIPS

The **JOURNEY FELLOWSHIP IN BIOMEDICAL RESEARCH** is offered annually by St. Jude Children's Research Hospital. It honors the memory of Dr. Leon Journey, a distinguished cell biologist and electron microscopist who served on the institution's staff for 10 years. The fellowship is open to a junior investigator with an M.D. or Ph.D. degree who seeks training experience in one of the specialty areas of biomedical research available at this center. These include biochemistry, immunology, tumor cell biology, pharmacology, pharmacodynamics, virology and molecular biology, pediatric oncology, hematologic malignancies, and infectious diseases.

Journey fellowships are made for up to 2 years and are based on merit, recommendations and promise of a productive career in biomedical research. Stipends are highly competitive.

Application deadline: 1 January 1990

Award notification: 15 February 1990

Beginning date: 1 July 1990

Send inquiries to:

Allan Granoff, Ph.D., Deputy Director
St. Jude Children's Research Hospital
P.O. Box 318
Memphis, TN 38101

Equal Employment/Affirmative Action Employer.

The **KARNOFSKY FELLOWSHIP IN CANCER RESEARCH** honors Dr. David A. Karnofsky, former chief of Medical Oncology at Memorial Hospital, New York, and head of the Division of Chemotherapy Research, Sloan-Kettering Institute, whose research established worldwide recognition of the importance of chemotherapy in the treatment of cancer. Dr. Karnofsky was a member of the St. Jude Children's Research Hospital Scientific Advisory Board and this fellowship, offered each year, is in his memory. The fellowship is available to investigators with either a Ph.D. or M.D. degree who are beyond the junior level of accomplishment and who would like to gain further experience and expertise in one of the biomedical research specialties available at St. Jude. These include biochemistry, immunology, tumor cell biology, pharmacology, pharmacodynamics, virology and molecular biology, pediatric oncology, hematologic malignancies, and infectious diseases. Awards are made for up to 2 years. Stipends are highly competitive.

Application deadline: 1 January 1990

Award notification: 15 February 1990

Beginning date: 1 July 1990

Send inquiries to:

Allan Granoff, Ph.D., Deputy Director
St. Jude Children's Research Hospital
P.O. Box 318
Memphis, TN 38101

Equal Employment/Affirmative Action Employer.

AWARDS

THE ROSENSTIEL SCHOOL OF MARINE AND ATMOSPHERIC SCIENCE OF THE UNIVERSITY OF MIAMI SEEKS NOMINATIONS FOR THE ROSENSTIEL AWARD

The Rosenstiel Award is presented annually to recognize outstanding achievement and distinction in oceanographic science. This year's award will be presented for excellence in the field of Marine and Atmospheric Chemistry. Nominations, including curriculum vitae and the names of three referees, should be sent by 31 October 1989 to:

Dr. Joseph M. Prospero, Chairman
Rosenstiel Award Committee
Division of Marine and Atmospheric Chemistry
University of Miami
4600 Rickenbacker Causeway
Miami, FL 33149-1098

FELLOWSHIPS

NSERC INTERNATIONAL POSTDOCTORAL FELLOWSHIP AT THE UNIVERSITY OF WATERLOO

The Department of Biology will be sponsoring one or more candidates for the 1990 competition for NSERC international fellowships (value \$28,000 per annum). The fellowships enable doctoral graduates from outside of Canada to spend up to 2 years engaged in research at a Canadian university. Successful candidates will be expected to become associated with one of the research programs currently under investigation in the Department. The Department of Biology is a strong, research-oriented Department with 35 full-time faculty and over 100 graduate students and postdoctoral fellows. Research interests cover the spectrum of biological sciences. Applications and/or enquiries should be directed to: **Dr. R. G. H. Downer, Chairman, Department of Biology, University of Waterloo, Waterloo, Ontario, Canada, N2L 3G1.** Application deadline: 13 October 1989.

POSTDOCTORAL NUTRITION TRAINING at the University of Pennsylvania Medical Center (**James L. Mullen, M.D.,** Program Director). Seven 1-year appointments available 1 July 1990. Four NIH-sponsored research traineeships in Cancer and Nutrition and three Clinical Fellowships in Nutrition/Metabolism are awarded on an Equal Opportunity basis. Research traineeships are available for M.D.'s with 2 years of residency training and Ph.D.'s. Individuals with 3 years of residency training may apply for the clinical fellowships. Deadline: 1 January 1990. Contact: **Irene Feurer, M.S.Ed., Department of Surgery, 4 Silverstein, Hospital of the University of Pennsylvania, 3400 Spruce Street, Philadelphia, PA 19104.** Telephone: 215-662-6156.

MARKETPLACE

NEED DNA FAST?

Custom Sequencing Primers in 26 hours*

Redundancies. Methylphosphonates. Phosphorothioates. 5'-Phosphorylation.
HPLC or Gel purification • High Quality & Low Prices

*1-800-247-8766

FAX 915-694-2387

The Midland Certified Reagent Co.

3112A W. Cuthbert, Midland, TX 79701

Custom DNA Purified and Delivered in 48 hours.

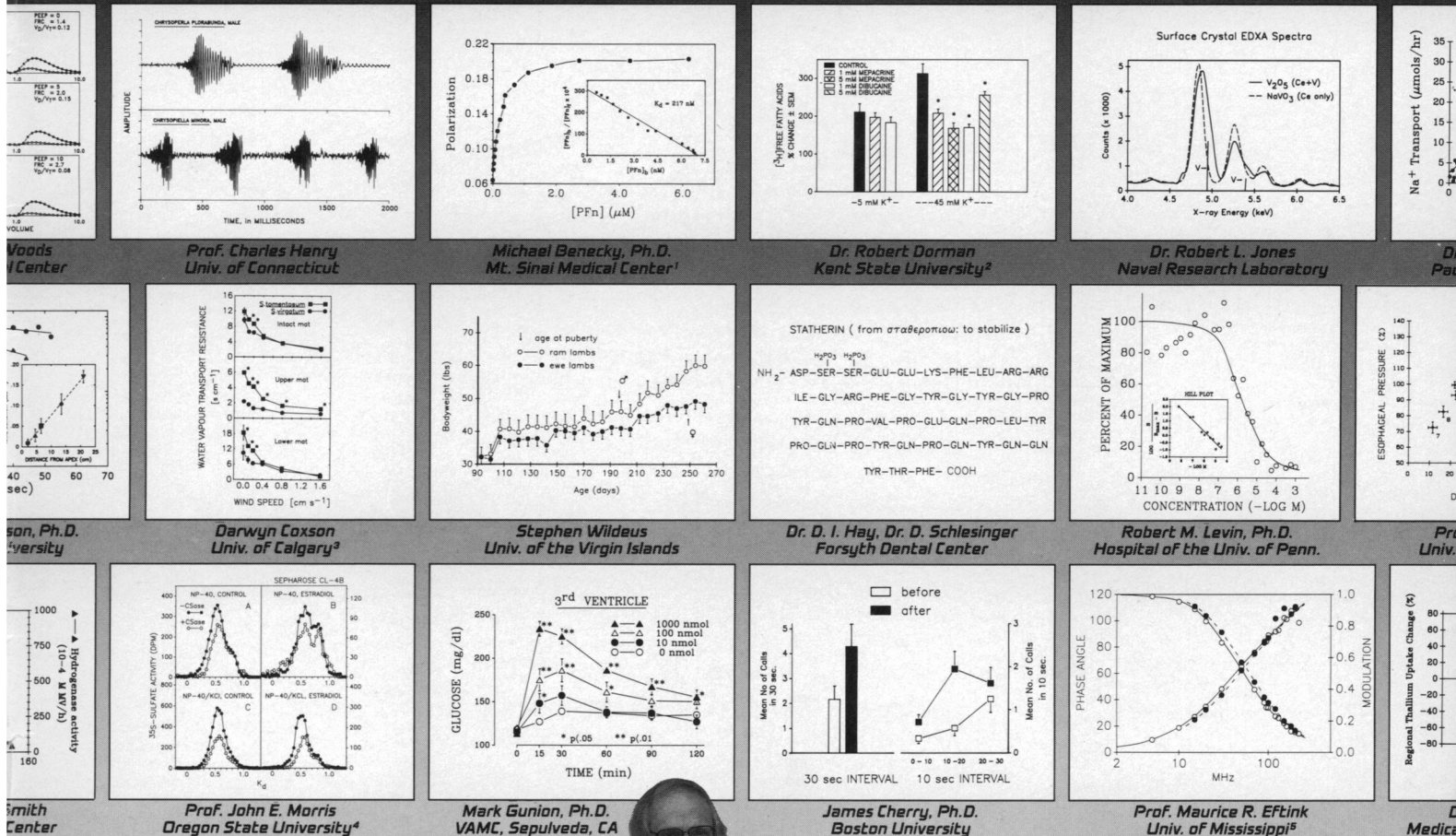
\$10.00 a base for the first 15 bases, \$7.50 for each additional base. No additional charges.

Research Genetics

1-800-533-4363

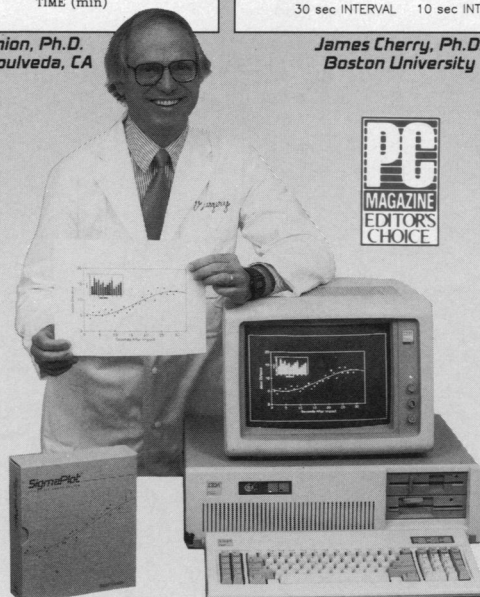
Circle No. 37 on Readers' Service Card

Over 12,000 leading Scientists are using Sigma-Plot!



The graphs above were sent to us by our customers. They were created using Sigma-Plot™, the leading PC software for the production of publication-quality charts and graphs for scientists. Sigma-Plot graphics have been published in literally hundreds of scientific journals, including *Science* and *Nature*. And it's no wonder, because Sigma-Plot is designed to create graphs the way you want to your specifications. It includes essential scientific features:

- Automatic error bars
- Multiple plots per page
- Polynomial curve fitting
- Log, semi-log, linear scales



- Export capability to Wordperfect 5.0, Pagemaker
- And much more...

Customers regularly tell us that Sigma-Plot is one of the finest applications programs they have used. And at under \$400, Sigma-Plot is in reach of nearly any budget. Find out yourself why over 12,000 leading researchers have chosen Sigma-Plot. For a FREE brochure or to order your own copy, call us today. Money-back guarantee.

Hardware Requirements: IBM PC, XT, AT, PS/2 or true compatible with 640k memory. CGA, EGA, VGA, or Herc. graphics. Supports HP plotters, Laserjet and Laserwriter printers, and selected dot-matrix printers.

65 Koch Road ■ Corte Madera, California 94925
Toll Free 800-874-1888 ■ Inside CA 415-924-8640
■ FAX: 415-924-2850 ■ Telex: 4931977

Jandel
SCIENTIFIC
"Microcomputer Tools for the Scientist"

In Europe: RJA Handels GmbH
Grosser Mühlenweg 14A, 4044 Kaarst 2, FRG
Phone: 2101/666268 FAX: 2101/64321

Circle No. 165 on Readers' Service Card

The graphs above were reprinted with permission of: 1.) *Biochemistry Journal* 1988, Vol. 27, pp 7565-71, Fig. 2. © 1988 American Chemical Society; 2.) *Brain Research Bulletin*, Vol. 21, Issue 3, pp. 445-450, Fig. 2. © 1988 Pergamon Press; 3.) *Canadian Journal of Botany*, 67, No. 1, 1989, National Research Council of Canada; 4.) *Endocrinology*, 122:242-253 (88), © 1988 The Endocrine Society; 5.) *Biochemistry Journal*, in press, © 1988 American Chemical Society. Their use does not imply endorsement by our customers' employers or publishers.

Inject new life into your old LC.

Introducing the HP 1050 Series of HPLC modules

The next time you add LC capabilities or replace an aging HPLC component, consider Hewlett-Packard. Our new HP 1050 Series of HPLC modules lets you upgrade to the HP quality you always wanted but thought was out of reach.

Grown out of the same innovative technology that produced the renowned, top-of-the-line HP 1090 family of HPLC systems, the HP 1050 Series brings you all the performance and reliability you've been missing — at a pace you can afford.

Add capabilities a piece at a time

Select from a range of compact, stackable, easy-to-use modules for solvent delivery, autosampling and UV-Visible detection. Available now are both isocratic and quaternary pump modules, variable and multiple wavelength detectors, and 21- and 121-vial autosampler modules. And more are on the way.

The advanced HP 1050 Series gives you the sensitivity, accuracy and precision you need. What's more, it gives you superb results without the usual hassles. That's because it eliminates most set-up, running and maintenance problems. And self diagnostics prevent wasted or lost samples.

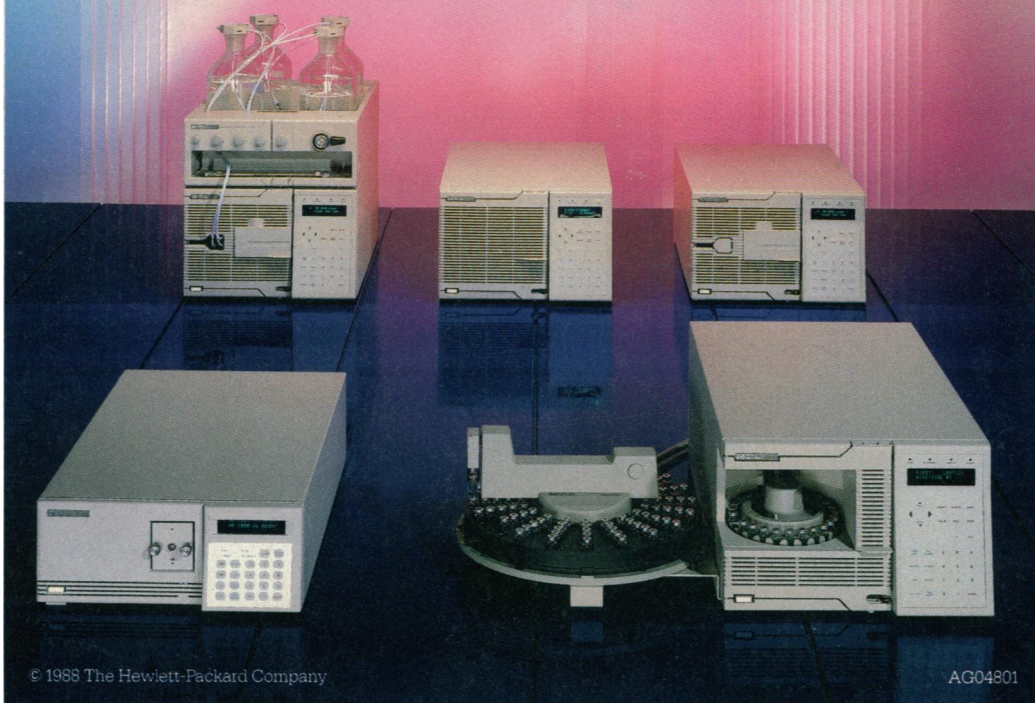
Trouble shooting, repair and parts exchange are extremely easy, too. Add to that HP quality, reliability and support, and downtime becomes almost nonexistent. In fact, reliability is so high, we offer a 99% uptime guarantee.

Learn more about the HP 1050 Series

Just call 1-800-556-1234, Ext. 1026. Inside California call 1-800-441-2345, Ext. 1026. Or call the HP sales office listed in the telephone directory white pages.

*we never stop
asking*

"What if..."



© 1988 The Hewlett-Packard Company

AG04801



**HEWLETT
PACKARD**

Circle No. 120 on Readers' Service Card