

These wavelengths are now accessible to astronomers, who in recent years have witnessed a veritable explosion of knowledge. The appearance of two major volumes of conference proceedings that review and summarize knowledge of the interstellar medium is, therefore, especially timely. Together they provide a concise summary of the state of the art in interstellar physics.

Interstellar Processes is the volume to purchase if your budget does not stretch to both. The editors commissioned nearly 30 authors to write tutorial-style papers on their specialties, and the resulting variety provides a broad perspective on everything you might need to know about the interstellar medium. There are papers on molecular and atomic clouds, cosmic ray-interstellar gas interactions, and magnetic fields—including a rare discussion of the origin of the Galactic field—and on theories of cloud formation, heating, and destruction, interstellar shock waves, and protostar formation. This is only part 1, and we are already nearly at p. 400. Part 2 tackles the fundamental issues of interstellar physics: the nature, chemistry, origin, and destruction of dust grains, gas phase chemistry and chemical evolution of molecular clouds and of entire galaxies, and heating and cooling processes. Not even interstellar masers or interstellar aspects of the solar system such as abundances and interplanetary dust of interstellar origin are omitted. Moreover, each contribution is a worthy review, long enough to satisfy the reader in need of a concise introduction to the topic. The authors are well chosen, and they give a representative view of their areas of specialization.

Physical Processes in Interstellar Clouds is of more variable quality and interest in its selection of authors and papers. The longer contributions, some of which coincide both in topic and authorship with those in *Interstellar Processes*, provide definitive introductions to such subjects as molecular clouds, interstellar chemistry, and interstellar magnetic fields. Other contributions are too short to present an overview of the subject and focus on specific issues that are of little interest to the nonexpert. However, here too the range of topics is comprehensive. There are highlights in the excellent chapters on magnetic fields and star formation, topics not covered elsewhere in recent years in comparable detail, except in the rival volume, *Interstellar Processes*.

The potential interstellar physicist would be well advised to read one of these books for a comprehensive and current introduction to the field of interstellar medium research. *Interstellar Processes* is superior, especially for the novice, but *Physical Processes in Interstellar Clouds* also merits attention.

There has been an outstanding gap in this area for some years, and the two volumes together provide topical overviews that should nullify the need for any further reviews for several years to come.

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Books Received

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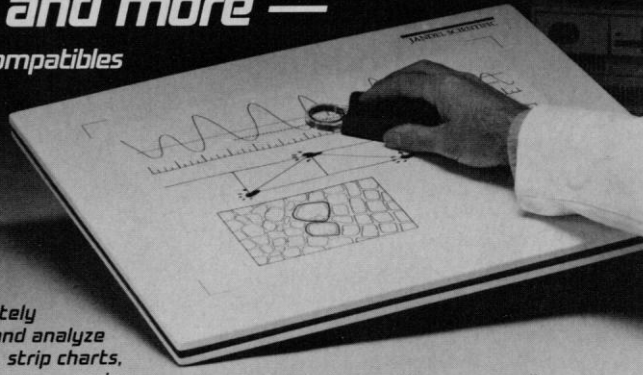
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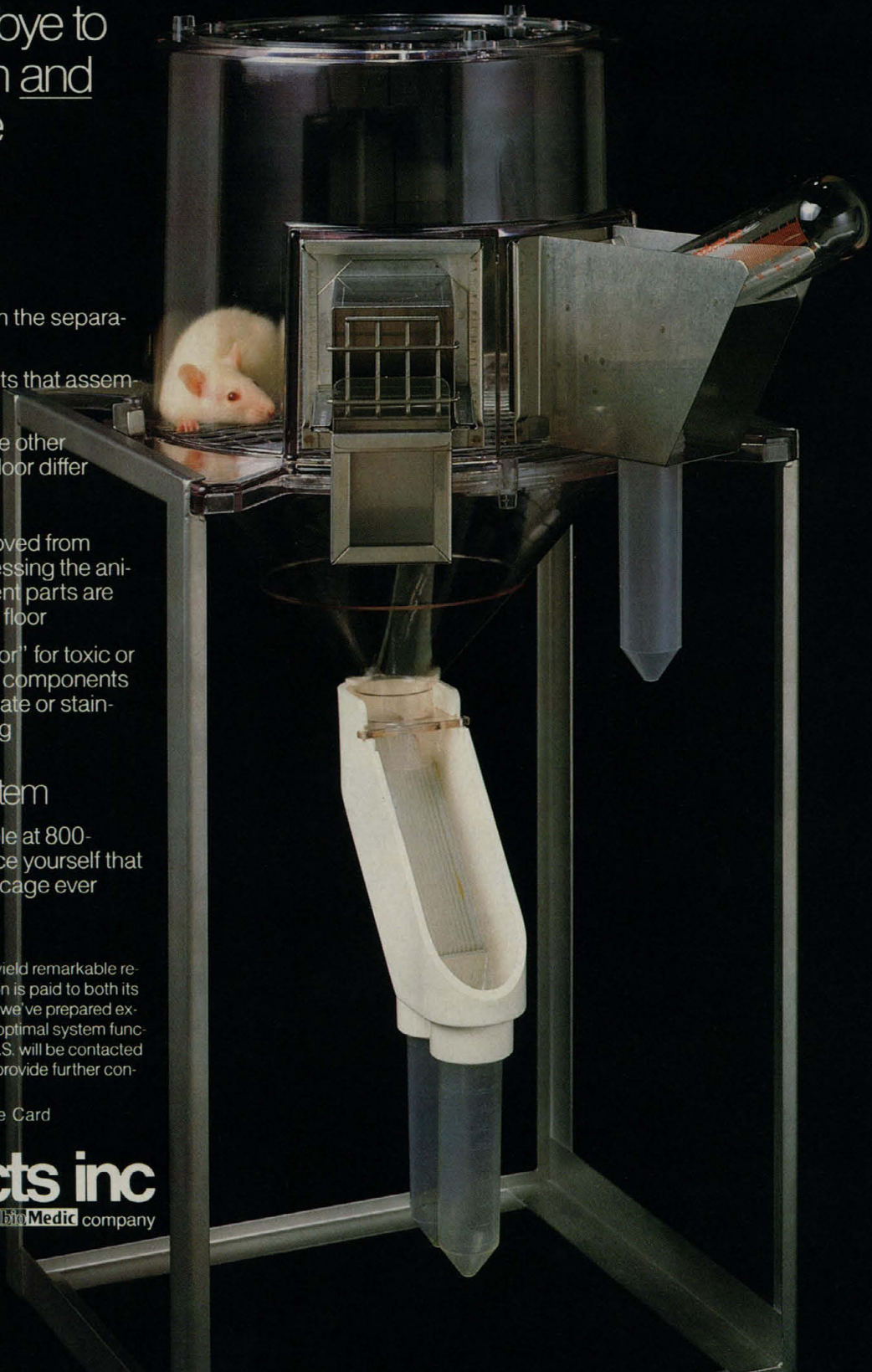
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Booth 2665

LC Simulation Software

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Booths 3536, 3538

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Booths 101-109, 200-209, 300-308

HPLC Columns

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Packed columns are available in lengths of 10 to 150 mm with internal diameters of 4.6 or 6.0 mm. DyChrom. Circle 478.

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(Continued on page 808)

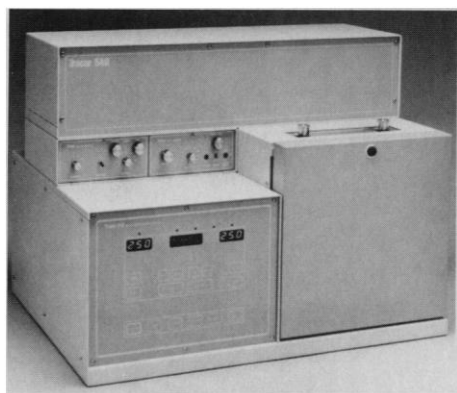
(Continued from page 807)

an RS-232C digital interface. A computer of the IBM PC family may be attached for external control and enhanced storage of methods. Suprex. Circle 483.

Booths 1077, 1079, 1176, 1178

Gas Chromatograph

The Model 540 gas chromatograph can be configured as either a single- or a dual-detector instrument. Light-emitting diode displays show system parameters. The mi-



croprocessor-controlled model 540 also has five-level temperature programming, ten-method storage, protected memory, and self-diagnostics. The large oven can hold megabore columns and features rapid heating and cooling. Tracor Instruments Austin. Circle 495.

Booths 2856-2860

Gas Cylinder Depletion Guard

The Cylinder Pressure Watch sets off an alarm when pressure in a gas chromatography gas cylinder drops below a user-set point. The device is safe for all gases, including hydrogen. The alarm sounds for 4 days. Three models are available; one mounts on the cylinder, another is installed on the line ahead of the regulator, and the third has a remote alarm. Chemical Research Supplies. Circle 485.

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spectral acquisition and analysis software, and a spectral database. The PC. Spectrometer calibrates wavelengths automatically with an internal mercury-argon source. Photodiode arrays with quartz windows and 128, 256, 512, or 1024 elements are especially sensitive to ultraviolet. SC Technology. Circle 484.

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Booths 3821, 3823

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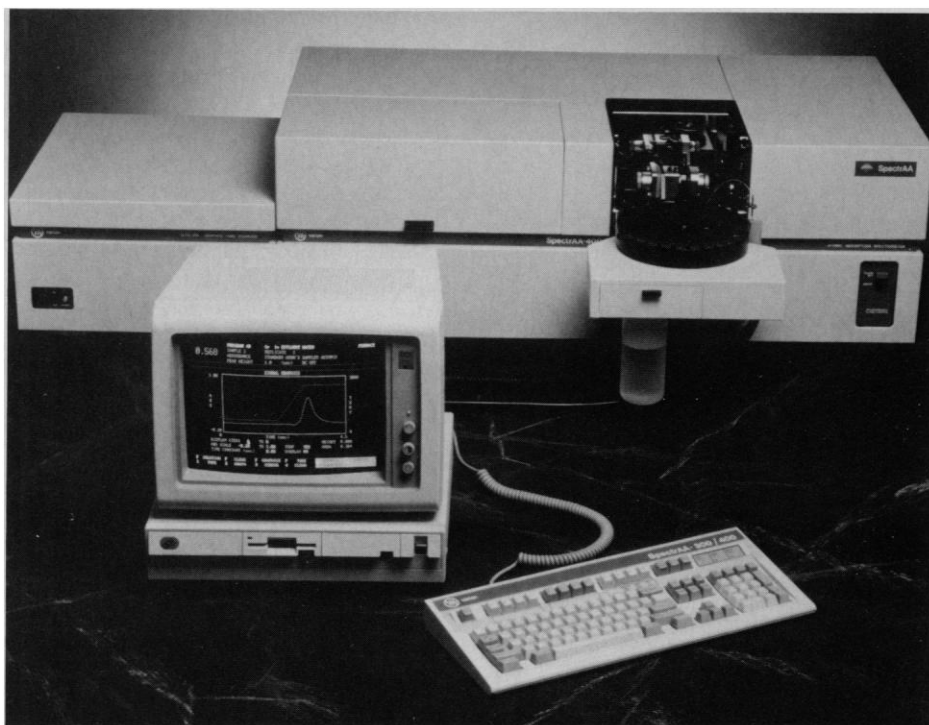
Chemical Word-Processing Software

ChemText 1.2 is a chemical text and image processor. Molecules may be constructed from templates or drawn with a mouse and then merged with text, tables, schemes, figures, and graphs. A graphics preview function allows the user to see what the document will look like when printed. Different fonts may be used in the same document; the fonts include mathematical symbols, the Greek and Cyrillic alphabets, European accents and characters, script letters, and a nonproportional font for tables and amino acid sequences. A spelling checker can check French, German, or American or British English words; the user may add other words to the dictionary. The user can create multilevel formulas and equations. ChemText 1.2 operates on the IBM PC family and 100% compatible computers with a graphics interface card, a mouse, and a hard disk. Molecular Design. Circle 477.

Booths 3165-3169 (odd)

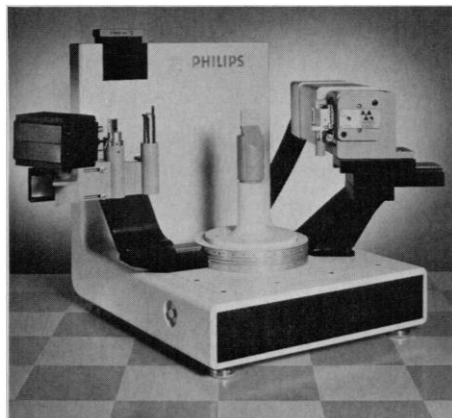
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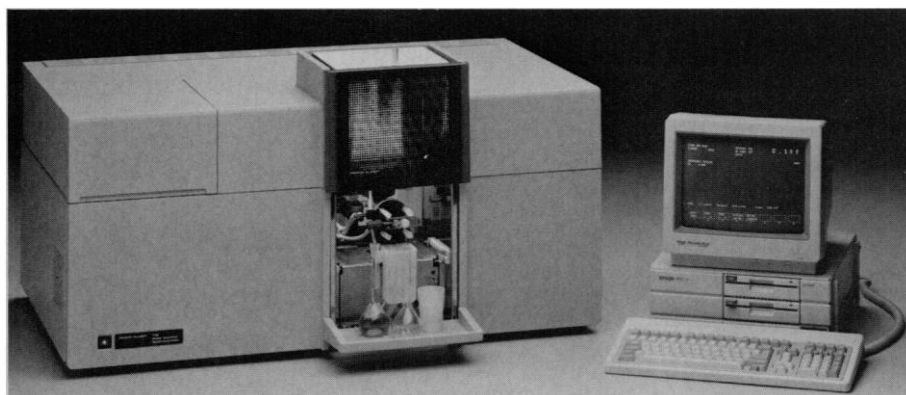
Ultraviolet-Visible Spectrophotometer

The Ultrospec Plus is an ultraviolet-visible spectrophotometer with four built-in programs for collecting and analyzing measurement data. The Multiple Wavelength program allows ten wavelengths to be measured and calculates two-point and three-point net results. An absorbance ratio feature can check DNA and RNA samples for purity. The Kinetics program determines enzyme activities and plots and analyzes graphs. Substrate concentrations can also be calculated. The Wavelength Scanning program plots first-, second-, and fourth-order derivative graphs for absorbance or transmission spectra. Peak tables can be included in the results. The Standard Curve program allows the user to apply any of three curve-fitting methods to nine standard concentrations, and the resulting data may be manipulated and stored. The Ultrospec Plus has a built-in dot-matrix printer. Pharmacia LKB Biotechnology. Circle 492.

Booths 223-235 (odd), 322-334 (even)

Atomic Absorption Spectrometer

Model 2100 is a fully automated atomic absorption spectrometer. Its double-beam optical system has a single path to increase energy throughput and reduce noise; the burner system automatically moves the



flame out of the light path during nonmeasurement periods so that the reference beam may use the path. An Epson computer controls the model 2100 and its accessories; it has a special keyboard that allows the user to issue commands with a single keystroke. Perkin-Elmer. Circle 480.

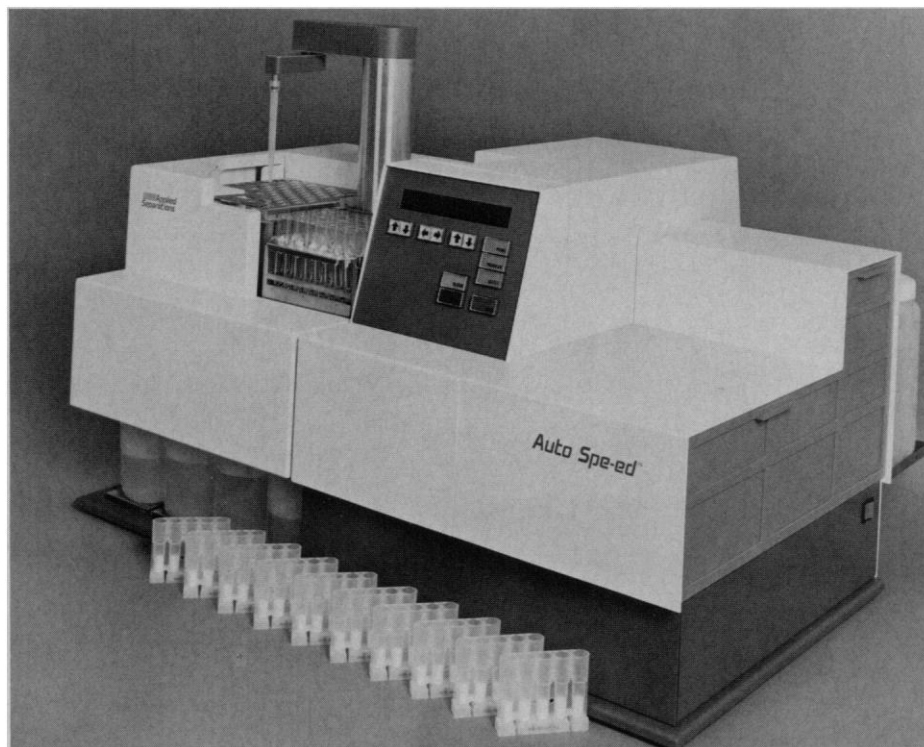
Booth 4025

Automated Solid-Phase Sample Preparation

The Auto Spe-ed processes samples for solid-phase extraction after only a few keystroke commands; the user need not intervene again. Fifty samples may be processed at one time with 85 to 100% recoveries and 2 to 3% coefficients of variation. The Auto Spe-ed requires only 5% of the quantity of hazardous and flammable solvents as manual methods do. Samples are processed through

disposable cassettes packed with a variety of selective sorbents. The instrument automatically conditions the cassettes, extracts sample volumes from 200 μ l to 50 ml, removes interferences, and collects multiple sample eluate fractions as large as 10 ml. Different classes of compounds of varying polarities may be extracted from aqueous or nonaqueous solutions. Applied Separations. Circle 496.

Booths 3820, 3822



(Continued on page 810)

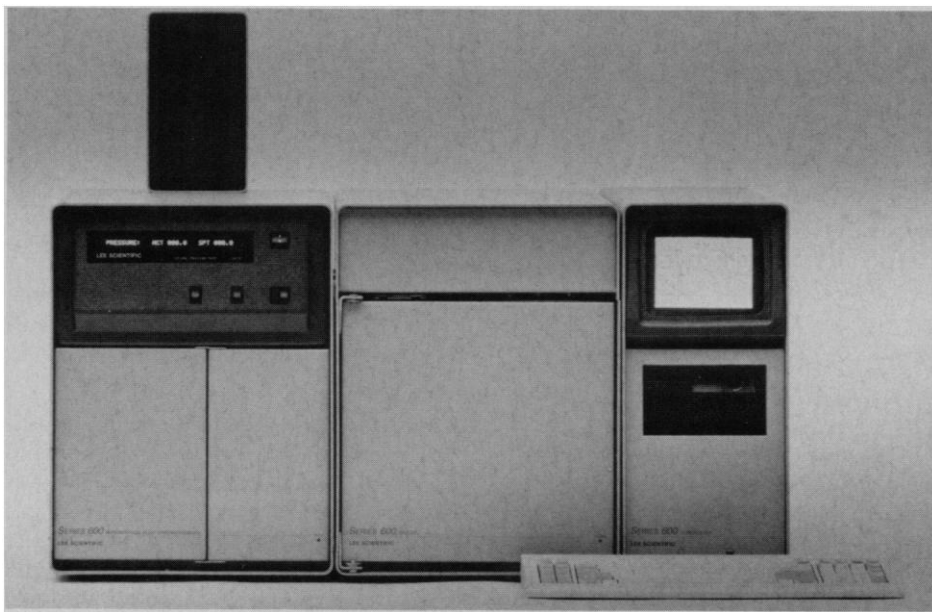
(Continued from page 809)

Supercritical Fluid Chromatograph

The model 602 is a supercritical fluid chromatograph with a pulseless 165-ml-capacity syringe pump. It can accept flame ionization, nitrogen-phosphorus, and ultraviolet detectors. The compact oven heats at

50°C per minute and cools at 70°C per minute; the symmetry of the oven's left and right halves allows detectors and injectors to be installed on both sides. Interfaces are available for performing hyphenated techniques. The user can control pressure, density, and temperature. The model 602 accommodates large-bore columns for packed-column supercritical fluid chromatography. Lee Scientific. Circle 487.

Booths 2172-2178 (even)



FTIR Spectrometer

A compact Fourier-transform infrared spectrometer is available. Because it is portable, can be operated in any orientation, and requires no water, air, or cryogenic cooling, it is suited for operation in harsh environments. The optical bench includes a 20- by 23- by 15-cm sample compartment that will accommodate most standard sample hold-

ers. Any foreign or domestic line voltage can power the bench. The spectral signal-to-noise ratio is greater than 1000:1 at 2000 cm^{-1} , and baseline tilts are less than 0.5% between 400 and 4400 cm^{-1} . The system includes the spectrometer, software, and cards for mathematics and an IBM PC-compatible interface; a computer and a plotter are extra. \$19,000. MIDAC. Circle 490.

Booth 2673



ChemStation-Computer Communications

InfoLink is a software program that allows files to be transferred between the Hewlett-Packard 310 and IBM AT-compatible computers. For example, chromatography data collected on the ChemStation can be analyzed on a computer. Transfers can be made between HP ASC and IBM ASCII and between HP Data and IBM Binary at rates between 300 and 19,200 baud. InfoMetrix. Circle 498.

Booth 1484

Data Collection Program

SMARTLOG is a software program for collecting, reviewing, manipulating, and reporting analytical data. It can automatically collect data from many analytical instruments. Built-in quality control routines determine spike recovery and generate charts. Linear regression routines automatically calibrate instrument output either by direct comparison to standards or by the method of standard additions. Users can define the report formats. An optional accessory program produces the deliverable data package required by the Inorganic Contract Laboratory Program. Telecation Associates. Circle 488.

Booth 4207

Literature

The *Filter Prep System* technical brochure describes a repetitive dispensing system that can replace manual radioreceptor assay tasks. Cole-Parmer Instrument. Circle 499.

Booths 262-267

Sedigraph 5100 is a 12-page brochure about an automated sedimentation particle size analyzer with a built-in 20-megabyte hard disk. Micromeritics. Circle 501.

Booths 1449-1455 (odd), 1548-1554 (even)

The brochure *Solids Analyzer RSA II* describes a solids-testing instrument with a force rebalance transducer, automatic strain adjustment, and menu-driven software. Rheometrics. Circle 502.

Booths 2932, 2934

Introducing pH By PC is a brochure featuring a hardware-software system for collecting and storing pH and ion-selective electrode information. Computer Chemistry. Circle 503.

Booth 2669

606 pp., illus. \$109. Institute of Physics Conference Series, no. 86.

Quiddities. An Intermittently Philosophical Dictionary. W. V. Quine. Belknap (Harvard University Press), Cambridge, MA, 1987. xii, 249 pp. \$20.

Radar Days. E. G. Bowen. Hilger, Bristol, U.K., 1987 (U.S. distributor, Taylor and Francis, Philadelphia). xiv, 231 pp., illus. \$28.

Radiocarbon Dating. An Archaeological Perspective. R. E. Taylor. Academic Press, Orlando, FL, 1987. xii, 212 pp., illus. \$39.50.

A Reference Catalogue and Atlas of Galactic Novae. Hilmar W. Duerbeck. Reidel, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). 212 pp., illus. \$48. Reprinted from *Space Science Reviews*, vol. 45, nos. 1-2.

Reflections on Kurt Gödel. Hao Wang. Bradford (MIT Press), Cambridge, MA, 1987. xxvi, 336 pp., illus. \$25.

Right Whales. Past and Present Status. Robert L. Brownell, Jr., Peter B. Best, and John H. Prescott, Eds. International Whaling Commission, Cambridge, U.K., 1986. viii, 289 pp., illus. \$60. Reports of the International Whaling Commission, Special Issue 10. From a workshop, Boston, MA, June 1983.

Scanning Electron Microscopy and X-Ray Microanalysis. Graham Lawes. Published for Analytical Chemistry by Open Learning, London, by Wiley, New York, 1987. xviii, 103 pp., illus. Paper, \$21.95.

Seismic Tomography. With Applications in Global Seismology and Exploration Geophysics. Guust Nolet, Ed. Reidel, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). x, 386 pp., illus. \$68; paper, \$38. Seismology and Exploration Geophysics.

Setting Limits. Medical Goals in an Aging Society. Daniel Callahan. Simon and Schuster, New York, 1987. 256 pp. \$18.95.

The Stages of Human Evolution. Human and Cultural Origins. C. Loring Brace. 3rd ed. Prentice-Hall, Englewood Cliffs, NJ, 1988. vi, 154 pp., illus. Paper, \$14.

Statistical Analysis with Missing Data. Roderick J. A. Little and Donald B. Rubin. Wiley, New York, 1987. xvi, 278 pp., illus. \$34.95. Wiley Series in Probability and Mathematical Statistics.

Theory and Models in Vegetation Science. I. C. Prentice and E. van der Maarel, Eds. Junk, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). 223 pp., illus. \$122.50. Advances in Vegetation Science, 8. From a symposium, Uppsala, Sweden, July 1985. Reprinted from *Vegetatio*, vol. 69.

Thermodynamic Properties of Helium. V. V. Sychev *et al.* Theodore B. Selover, Jr., English-language edition editor. Hemisphere (Harper and Row), New York, 1987. xvi, 316 pp., illus. \$120. National Standard Reference Data Service of the USSR, vol. 1. Translated from the Russian edition (Moscow, 1984). The first volume of a series in which volumes on other substances, including methane, ethane, oxygen, and ethylene are also now available.

Thermophysical Properties of Freons. Methane Series. V. V. Altunin *et al.* Theodore B. Selover, Jr., English-language edition editor. Hemisphere (Harper and Row), New York, 1987. Part 1, xxxiv, 200 pp., illus. \$120. vol. 8. Translated from the Russian edition (Moscow, 1980). Part 2, xxxvi, 243 pp., illus. \$120. Translated from the Russian edition (Moscow, 1985). National Standard Reference Data Service of the USSR, vols. 8 and 9.

Thin-Layer Chromatography with Flame Ionization Detection. Mojmir Ranny. Reidel, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). 198 pp., illus. \$54.

Through the Straits of Armageddon. Arms Control Issues and Prospects. Paul F. Diehl and Loch K. Johnson, Eds. University of Georgia Press, Athens, GA, 1987. xxiv, 279 pp. \$32.50; paper, \$12.95.

The Urban Naturalist. Steven D. Garber. Wiley, New York, 1987. xiv, 242 pp., illus. \$12.95.

Water Resources Policy for Asia. Mohammed Ali, George E. Radosevich, and Akbar Ali Khan, Eds. Balkema, Accord, MA, 1987. xii, 627 pp., illus. \$63.75. From a symposium, Dhaka, Bangladesh, Aug. 1985.

Women of Science, Technology, and Medicine. A Bibliography. Else Hyrup. Roskilde University Library, Roskilde, Denmark, 1987. viii, 132 pp. Paper. Skriftserie fra Roskilde Universitetsbibliotek, 15.

Wrong Relativity and a New Mathematics. Two Upsets of Established Belief Systems. Dallas Irvine. Green, St. Louis, MO, 1987. Various pages, illus. Paper, \$50.

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.

LINE CLASSIFIED ADVERTISING DEADLINES:

Thursday, 10 a.m., 2 weeks prior to issue date (mailed on issue date).

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): \$38.00 per line; \$380 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 and/or cover letter including billing address 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 \times \$38.00 = approximate cost of ad. (This is an approximate cost ONLY. Allow for variation between estimated lines and actual typeset lines and the resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment.)

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

Immunochemistry/tumor immunology, Ph.D., 4 years of postdoctoral experience in glycoconjugate purification, characterization, and modification. HPLC, monoclonal antibodies, immunoassays, radioimmunoassay in animal models and clinical trials. Supervisory and teaching experience. Seeks faculty-level academic or industrial position. Box 19, SCIENCE.

Immunologist, Ph.D. Extensive background in academic and biotechnology research and development. Experience in hybridoma technology, large-scale cell culture, and lymphokines. In-depth knowledge of all phases of project and laboratory management. Seeking academic/industrial position. Box 20, SCIENCE.

Ph.D. Biology: Medical researcher in neurosciences. Four years of postdoctoral experience in neuroanatomical techniques, anterograde and retrograde tracing, immunohistochemistry, double labeling, histology, histochemistry, ELISA, tissue culture, etc. Seeking research position in industry or university. Box 24, SCIENCE.

POSITIONS WANTED

Microbiologist, M.S. seeking employment as research assistant or lab technician. Have over 2 years of laboratory experience in protein purification, column chromatography, bacterial cell culture, spectrophotometry, electrophoresis. Trained in microbial genetics and physiology, medical mycology, bacteriology, biochemistry, immunochemistry, radioisotopes, electron microscopy. David Lambert, 1009 S.W. 17th Street, Willmar, MN 56201; 612-235-7518.

Microbiologist, Ph.D. Research experience in genetics, microcosms, plasmid isolation and manipulations (including DNA probes), bacterial conjugation and transformation of anaerobic bacteria. Interests in genetics, plasmid molecular biology, food technology, engineering, SEM, and Japan/Japanese. Seeking industrial or faculty level academic position. Box 18, SCIENCE.

Ph.D. Biochemist. Two years of postdoctoral experience in protein chemistry and enzymology. Strong publication record. Seeks postdoctoral position in Canada. Box 23, SCIENCE.

Ph.D. Retrovirologist. AIDS researcher with publications and teaching experience. Cell biologist with some molecular biology experience. Current research focused on the neurotropic determinants of HIV. Laboratory manager with an overview of the functional biology of the HIV, and antiviral agents. Seeks academic/industrial or research position with the government in Washington, DC area. Box 25, SCIENCE.

Science Writer/Editor: Zoology/physiology Ph.D., biochemical research publications, anatomy textbooks, author of free-lance magazine and newspaper articles. Seeking writing/editing, ghostwriting, collaborative, consulting projects, any biomedical field. Write: Master Wordworks, Route 2, Box 332, Fulton, MO 65251. Telephone: 314-642-9749.

Scientific Programming. Advanced scientific degree and extensive experience in design and development of scientific applications. IBM, Apple and VAX experience. Seeks long- or short-term projects. Box 26, SCIENCE.

POSITIONS OPEN

ACADEMIC POSITION IN MEMBRANE BIOLOGY

Department of Physiology seeks applications for a tenure-track faculty position, in assistant professor working in membrane biology. The Department tries to maintain a good environment for serious research.

Please send a statement of your research plans and dreams, curriculum vitae, and the names of a few scientists familiar with you and your work, to: **R. S. Eisenberg, Chairman, Department of Physiology, Rush Medical College, 1750 West Harrison, Chicago, IL 60612.**

Eastern New Mexico University invites applications for **ASSISTANT PROFESSOR** tenure-track position. Responsibilities: Teaching in general botany, vascular plant systematics, plant anatomy, plant physiology and introductory courses in general biology; active research; university service. Qualifications: Ph.D. in field appropriate to above description of duties. Effective date: 23 August 1988 pending funding. Send letter of application describing teaching and research interest, curriculum vitae, official transcripts and three letters of recommendation to: **Dr. Newel Jorgensen, Chair, Search Committee, Department of Life Sciences, #33, Eastern New Mexico University, Portales, NM 88130** by 20 March 1988. ENMU is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR: A position in exercise physiology for a Ph.D. with postdoctoral research experience in muscle and its response to exercise. Individuals will be expected to obtain external funding, attract graduate students and to teach. Starting date: 16 August 1988. Submit letter of application, curriculum vitae, three reprints, and three letters of recommendation to: **Chairman of the Search Committee: R. M. Enoka, Ph.D., Department of Exercise and Sport Sciences, University of Arizona, Tucson, AZ 85721.** Application deadline 11 March 1988. An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

ACADEMIC LABORATORY PATHOLOGIST—The Department of Pathology at the University of Pittsburgh is seeking an academic pathologist with interest and experience in laboratory medicine for a full-time faculty position at the assistant professor level. The successful candidate will work with three other pathologists in providing comprehensive laboratory services in an adult ambulatory care setting. Candidates must be Board-certified or -eligible in CP though eligibility/certification in both AP/CP is also desirable. Applicants with research interests in laboratory medicine are encouraged to apply. Responsibilities also include medical student and resident education. Inquiries will be held in strict confidence. Submit curriculum vitae and bibliography to: **University of Pittsburgh School of Medicine, Department of Pathology, 776 Scaife Hall, Pittsburgh, PA 15261, Attention: A. Roman-Koller.** The University of Pittsburgh is an Affirmative Action/Equal Opportunity Employer. Deadline is 30 June 1988.

ANATOMIST—UNIVERSITY OF CALIFORNIA, SAN DIEGO VISITING PROFESSOR position open to teach gross anatomy at the UCSD School of Medicine, Department of Surgery, Anatomy Division. Qualifications include: Ph.D. in anatomy or M.D. with equivalent training; Professor-level experience in teaching medical students gross anatomy with a strong clinical orientation; Established expertise as a teacher in the university setting; Experience and ability in administration within an academic setting. Four-month appointment (September through December 1988). Salary dependent on qualifications. Closing date: 1 April 1988. Successful candidate may be reappointed in future years. Send curriculum vitae and names of three academic references to: **Nicholas A. Halasz, M.D.; Department of Surgery, 225 Dickinson Street, San Diego, CA 92103.**

ASSISTANT PROFESSOR OF BIOLOGY. Applications are invited for the position of assistant professor of biology, a tenure-track appointment beginning mid-August 1988. A Ph.D. in cellular/molecular biology is required, and some teaching experience in biotechnology and/or plant science would be desirable. Teaching duties will include first-year biology courses and cell biology. The University of Houston—Downtown is an urban undergraduate institution with an enrollment of 7,200. Send a letter of application, résumé, and the names and addresses of four references to: **Dr. Al Avenoso, Department of Natural Sciences, University of Houston—Downtown, One Main Street, Houston, TX 77002.** Applications should be postmarked by 8 March 1988. The University of Houston—Downtown is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR MOLECULAR VIROLOGY

The Departments of Ophthalmology and Virology of Baylor College of Medicine seek an innovative scientist to develop an independent research program on herpes virus infections. Responsibilities also include establishing and coordinating a diagnostic ocular virology laboratory. Applicants for this tenure-track position at the assistant professor level should have a Ph.D. with at least 2 years of productive postdoctoral experience in virology research. Salary is commensurate with experience. Negotiable starting date. Send curriculum vitae, names of at least three references, and a statement of research interests to: **Dr. K. R. Wilhelmus, Chairperson—Search Committee for Molecular Virologist Position, Department of Ophthalmology, Cullen Eye Institute, Baylor College of Medicine, One Baylor Plaza (NC200), Houston, TX 77030.** Equal Opportunity Employer.

ASSISTANT RESEARCH PHYSICIST. Applications are solicited for the position of assistant research physicist, to work in the area of optical studies of surfaces and thin films. Salary range will be \$36,600 to \$37,800 for 12 months, depending on qualifications. A Ph.D. degree in a related field is required. Experience in the following areas is important: Ultra high vacuum methods; modern surface science electron spectroscopies, including AES, LEED, and XPS; laser Raman scattering spectroscopy of solids and surfaces; prism techniques for radiation coupling to surface modes of thin films; Fourier transform mass spectrometry methods; pulsed laser technology. Applicants should send their résumé to: **Professor John C. Hemminger, Department of Chemistry, University of California, Irvine, CA 92717.** UCI is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT DEAN MEDICAL SCIENTIST TRAINING PROGRAM

The University of Texas Southwestern Medical Center at Dallas seeks an Assistant Dean to manage student recruitment for its expanded Medical Scientist Training Program, a dual degree program that awards both M.D. and Ph.D. degrees to outstanding students who complete a rigorous course of study and research in medicine and biomedical science.

The Medical Scientist Training Program is one of twenty-five M.D./Ph.D. programs around the country that are funded by the National Institutes of Health. A large gift from Mr. Ross Perot has enabled Southwestern to double the enrollment of this highly selective program while ensuring that the very best students, wherever they may be, are attracted to it.

The Assistant Dean will be expected to build a network of professional contacts, particularly among premedical advisors, science advisors, and science department chairs at colleges and universities. This person will develop and maintain an extensive database and file system dedicated to student recruitment, will plan and undertake numerous recruiting trips, and will provide support and coordination to the faculty as they assist in recruitment and admissions. The Assistant Dean will also assist the Director of the Program in administrative matters and will plan and coordinate activities for students enrolled in the Program.

The University seeks an energetic, enthusiastic, and articulate individual who understands biomedical science and who conveys its excitement to students. A commitment to the highest standards and the ability to recognize excellence are essential. A doctoral degree is desirable. The person must be willing to travel extensively.

The position carries an attractive salary and fringe benefits commensurate with applicant qualifications.

Résumés and letters of interest or nomination should be sent no later than 1 March 1988, to:

**Dean's Office
Southwestern Medical School
The University of Texas Southwestern
Medical Center at Dallas
5323 Harry Hines Boulevard
Dallas, TX 75235-9003**

An Affirmative Action/Equal Opportunity Employer

ASSISTANT PROFESSORSHIP POSITION IN SPINAL RECONSTRUCTIVE SURGERY

Applicants must have a specialty interest in bone histomorphometry. Applicants must have completed an approved spine fellowship and be capable of performing advanced spinal reconstructive surgical procedures. Please send résumé with salary history and requirements to: **Lee Riley, M.D., Department of Orthopedic Surgery, Harvey 611, Johns Hopkins Hospital, 600 North Wolfe Street, Baltimore, MD 21205.** Johns Hopkins University is an Equal Opportunity Employer.

ASSISTANT/ASSOCIATE PROFESSOR BIOCHEMISTRY/BIPHYSICS WASHINGTON STATE UNIVERSITY

The Biochemistry/Biophysics Program is seeking to fill a tenure-track position beginning August 1988 or later. Appointment will be at the assistant or associate professor level. Applicants should have research interests and experience in structural analysis of biological macromolecules or assemblies. Appropriate areas include application of x-ray crystallography, nuclear magnetic resonance, electron microscopy or spectroscopy to elucidation of structure in proteins, nucleic acids, protein-nucleic acid complexes or more complicated assemblies, including membranes. Candidates should have a Ph.D. in biophysics, biochemistry, or a related discipline, postdoctoral training, and a record indicating outstanding abilities and potential in research and teaching. The successful candidate will be expected to develop and maintain a vigorous research program supported by extramural funding, train graduate students, and participate in graduate and undergraduate teaching. Send a letter of application, curriculum vitae, statement of research plans and three letters of reference to: **Dr. Gerald L. Hazelbauer, Faculty Search Committee, Biochemistry/Biophysics Program, Washington State University, Pullman, WA 99164-4660.** Deadline is 15 March 1988 or until position is filled. WSU is an Equal Opportunity/Affirmative Action Educator and Employer. Protected group members are encouraged to apply and to identify their status.

POSITIONS OPEN

ASSISTANT RESEARCH SCIENTIST: Position immediately available for Ph.D. with 1 to 2 years of experience in molecular biology, and with a strong interest in the neurosciences. Applicants using contemporary approaches are particularly encouraged to apply. Please send curriculum vitae and statement of research plans as well as names of three referees to: **Joan Harmon, Personnel Department, NYU Medical Center, 550 First Avenue, New York, NY 10016.** An Equal Opportunity Employer M/F.

ASSISTANT SCIENTIST POSITION in the field of molecular and cellular biology relating to diabetic retinopathy research. Requirements include M.D. degree with strong background in clinical diabetes plus at least 3 years of research experience in molecular and cell biology. Publication record and ability to attract research funding essential. Contact: **Mara Lorenzi, M.D., Eye Research Institute, 20 Staniford Street, Boston, MA 02114.**

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

ASSISTANT/ASSOCIATE PROFESSORS IN BIOLOGY

Two tenure-track positions available in an expanding Department of Biological Sciences. Modern well-equipped facilities and modern programs provide exceptional opportunities for teaching and research. Nine- and 10-month appointments start September 1988 at salaries commensurate with qualifications and experience.

BIOCHEMICAL ENGINEER: Teaching and research position in a new biotechnology program. Teaching responsibilities include courses in biotechnology, biochemical engineering and other departmental courses related to area of expertise for undergraduate and graduate (master's degree) students. Applicant must have Ph.D.; demonstrated experience in fermentation and downstream processing; and commitment to teaching in a primarily undergraduate program and directing student research. Facilities include state-of-the-art fermentation facility with downstream processing equipment.

MEDICAL TECHNOLOGY: Ten-month position with responsibilities of directing University's baccalaureate MT program; teaching clinical courses and courses in related area of expertise; maintaining rapport with associated hospitals; and participating in departmental operations. Applicant must have MT (ASCP) or equivalent certification; recent clinical laboratory experience; and doctorate in related fields. Those wishing to establish research programs are encouraged to apply.

Mankato State University has a current enrollment of 15,000 students. The Greater Mankato area, population 42,000, is located 80 miles from the Minneapolis-St. Paul Metro area. Send names of three references, curriculum vitae, complete undergraduate and graduate transcripts, and a brief statement of teaching and research interests to: **Dr. John Frey, Chairperson, Department of Biology, Mankato State University, Mankato, MN 56001.** Applicant must be able to legally accept employment in the U.S. and have demonstrated ability to communicate effectively with students and colleagues. Closing date for applications is 31 March 1988, or until filled. Mankato State is an Equal Opportunity Educator and Employer.

ASSISTANT/ASSOCIATE PROFESSOR OF PHYSIOLOGY. The Department of Physiology, Loyola University of Chicago at the Medical Center is seeking candidates for a tenure-track position at either the assistant or initial associate professor level. The department has strong research programs in cardiovascular physiology and pathophysiology. We are seeking an individual with a cellular and molecular emphasis which is complementary to our systemic and integrative cardiovascular interests. Candidates must have a Ph.D. or M.D., an independent research program, and postdoctoral or previous faculty status experience. A commitment to excellence in teaching medical and graduate students is required. Applicants should send curriculum vitae including a list of publications, teaching experience, a brief statement of research interests, and at least three names of references by 15 March 1988 to: **James P. Filkins, Ph.D., Professor and Chairman, Department of Physiology, 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.

IMMUNOCHEMIST - IMMUNOLOGIST

For Studies of
Cytochromes P-450

Laboratory of Molecular
Carcinogenesis

NATIONAL CANCER INSTITUTE

Position of Senior Staff Fellow or Expert to use immunological and immunochemical approaches, particularly monoclonal antibodies to study cytochrome P-450 immunochemistry, their multiplicity, structure and function, their role in the metabolism, activation and detoxification of xenobiotic carcinogens, drugs and endogenous compounds. Salary Range: \$20,688-\$44,430. Applicants must be U.S. Citizens, permanent residents, or non-citizens from a treaty-allied country. Send curriculum vitae and three reference letters to Dr. Harry V. Gelboin, Chief, Laboratory of Molecular Carcinogenesis, National Cancer Institute, National Institutes of Health, Bldg. 37, Rm. 3E24, Bethesda, Maryland 20892.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

PHYSICAL BIOCHEMISTRY

G.D. Searle is a worldwide leader in the pharmaceutical industry. Expansion within our Drug Delivery area has created an outstanding opportunity for a Research Scientist who can combine an understanding of the physical nature of proteins and peptides derived from biotechnology with interdisciplinary teams working on drug delivery systems.

Key responsibilities include:

Develop, implement, and execute methods and procedures to characterize the physical and chemical properties of proteins, peptides, and small organics.

Interact with interdisciplinary teams to develop delivery systems for particular proteins, peptides, and small organics.

Direct scientists and provide "hands on" support when necessary to accomplish projects.

Qualifications include a Ph.D. in Physical Biochemistry or related field and 3-5 years of laboratory experience in the characterization of physical and chemical properties of biological molecules. Well developed oral and written skills required.

This position offers an excellent salary, high visibility, and a comprehensive benefits package. Our location offers access to a variety of cultural and recreational facilities, several fine universities and active scientific community. Please submit your resume in strict confidence to: **G.D. Searle & Co., Professional Staffing, Dept. HG, 4901 Searle Parkway, Skokie, IL 60077.** An Equal Opportunity Employer.

SEARLE



AFFINITY CHROMATOGRAPHY CHEMIST

Sigma Chemical Company, a leading manufacturer of biochemicals and organic compounds, is seeking a Biochemist/Chemist for its affinity chromatography group. The successful candidate will have a degree in Chemistry or Biochemistry and experience in affinity chromatography preparation techniques. Responsibilities include bench level production of affinity media, protein purification and new product development. The position requires ability to do independent work as well as strong written and verbal communication skills.

Sigma offers competitive salary and full company paid benefits. Please send resume with salary history in confidence to:

**Personnel Manager (CAM)
SIGMA CHEMICAL COMPANY
P.O. Box 14508
St. Louis, MO 63178**

An Equal Opportunity Employer

SIGMA
CHEMICAL COMPANY

RESEARCH & DEVELOPMENT PROFESSIONALS

IN OUR PHARMACOLOGICAL R&D LABS THE FOCUS IS ON INNOVATION

For creative scientists, BERLEX Laboratories provides the ideal setting to initiate innovative projects. We are a growing pharmaceutical company and a leader in pharmaceutical R&D, and at our Cedar Knolls, NJ facility, you can work on one of the industry's most talented teams of research professionals.

SECTION HEAD OF BIOCHEMICAL PHARMACOLOGY

Direct the work of several Ph.D. scientists and biologists in a multidisciplinary environment to initiate novel research in cellular aspects of cardiovascular diseases. At the same time, you will be encouraged to pursue your own scientific interests. The biochemistry section includes a new cell culture facility for basic research in vascular and cardiac pharmacology.

To qualify, you should be a well-recognized professional in an area of biochemistry/pharmacology related to cell biology, and have demonstrated excellence in scientific creativity. At least 5 years of postdoctoral experience is essential, as are good communication skills and the ability to work in a team environment.

POSTDOCTORAL RESEARCH SCIENTIST

Work with biologists and chemists on new approaches to the treatment of cardiovascular diseases and initiate novel research in a multidisciplinary environment.

To qualify for this two year appointment, you must be a Ph.D. in an area related to muscle/endothelial cell biology.

BERLEX provides a generous salary, comprehensive benefits, and unusual opportunities for growth. Send your CV with salary history, in strict confidence, to: Attn: **LILA BERNSTEIN**, Manager, Human Resources, R&D, Dept S, **BERLEX LABORATORIES, INC.**, 110 E. Hanover Avenue, Cedar Knolls, New Jersey 07927. Equal Opportunity Employer M/W/H.

BERLEX
Laboratories, Inc.

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR NEURAL REGENERATION

The Department of Anatomy, School of Veterinary Medicine, Purdue University, is seeking to fill two tenure-track positions at the level of assistant or associate professor (depending on experience). Their primary appointment will be in the Center for Paralysis Research where their responsibility will be to develop and fund their own independent research laboratories within the Center. The candidates should possess exemplary academic credentials, and a corresponding record of grant acquisitions. Research experience should be in mammalian neuroscience, with an emphasis on development and regeneration of the nervous system. Relevant experience could include the analysis of behavioral deficits in spinal injured mammals, spinal cord electrophysiology, tract-tracing techniques and analysis of electric field effects in tissues. Novel approaches to problems of regeneration using mammalian neuronal tissue culture techniques are also of interest. Applications must be accompanied by a current curriculum vitae, the names of three references, be postmarked no later than 15 March 1988, and be addressed to: E. J. Hinsman, Department of Anatomy, School of Veterinary Medicine, Purdue University, West Lafayette, IN 47907.

Purdue University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE PROFESSOR OF PHARMACOLOGY—Applications are invited for a tenure-track position available 1 June 1988. Responsibilities include teaching in a team-taught pharmacotherapeutics course and establishing a research program. Experience in neuropharmacology of special interest. Undergraduate pharmacy degree also desirable. Interested applicants should submit curriculum vitae and names of three references to: J. Mark Winston, Ph.D., College of Pharmacy and Health Sciences, Drake University, 2842 Forest Avenue, Des Moines, IA 50311. *An Equal Opportunity/Affirmative Action Employer.*

U.S. DEPARTMENT OF ENERGY ASSOCIATE DIRECTOR FOR HEALTH AND ENVIRONMENTAL RESEARCH OFFICE OF ENERGY RESEARCH

The Department of Energy (DOE) is seeking applicants for the Senior Executive Service position of associate director for Health and Environmental Research. This executive plans, manages and assesses Office of Energy Research supported basic and applied research. Program aspects include molecular and subcellular mechanisms underlying human somatic and genetic processes and their responses to environmental toxicants; atmospheric, marine and terrestrial processes; nuclear medicine and epidemiology, structural biology, and advanced instrumentation.

The preferred candidate will be a U.S. citizen with a M.D. or Ph.D. degree in an appropriate biological science. He/she will have experience in directing basic and applied research in health and medical sciences; integrating internal and external program and policy issues; directing/guiding programs, projects, or policy development; and program monitoring and evaluation. Salary range: \$64,700 and \$75,500. Position location: DOE facility, Germantown, Maryland.

Direct inquiries to and obtain application materials from: Ms. Rosalee Williams-SM/88/2, MA-204.1; Office of Personnel, U.S. DOE, 1000 Independence Avenue, S.W., Washington, D.C. 20585, or call: 202-586-8461. Completed applications must be postmarked no later than 2 March 1988.

U.S. DOE is an Equal Opportunity Employer.

ASSOCIATE RESEARCH SCIENTISTS (two positions) to study microvascular blood flow by intravital microscopy in sickle cell disease and other blood disorders. Requirements: Ph.D. in bioengineering, physiology, or pathology. Related experience desirable. Send curriculum vitae with names of three references to: Dr. Herbert H. Lipowsky, Department of Physiology and Cellular Biophysics, College of Physicians and Surgeons, Columbia University, 630 West 168 Street, New York, NY 10032.

Columbia University is an Equal Opportunity Affirmative Action Employer

POSITIONS OPEN

BIOCHEMISTS

BioActives Inc. is a rapidly growing company involved in the development of biomedical and agricultural products based on novel molecules found in a variety of natural products, particularly invertebrate venoms. We seek two biochemists to isolate and purify biologically active molecules from venoms and to assist in determining their structures. One position requires a Ph.D. in biochemistry or chemistry, and extensive practical experience in high-performance liquid chromatography (HPLC); the other position requires a bachelor's degree and HPLC experience. The positions are available immediately. The salary is negotiable and depends upon experience and qualifications. A generous benefits package is offered. Please apply by sending curriculum vitae and the names of three references to: Dr. T. N. Parks, BioActives Inc., 420 Chipeta Way, University of Utah Research Park, P.O. Box 8327, Salt Lake City, UT 84108. *An Equal Opportunity Employer.*

BIOCHEMISTRY/MOLECULAR BIOLOGY MEHARRY MEDICAL COLLEGE

Two faculty positions are available in July 1988 in the Department of Biochemistry at the level of ASSISTANT OR ASSOCIATE PROFESSOR for well-trained or experienced candidates in biochemistry and molecular biology/molecular genetics. Successful applicants will be expected to develop and/or maintain a funded research program of high quality and to participate in the graduate and professional (medical, dental and allied health) school teaching programs of the Department. Applicants should send curriculum vitae, names of four individuals who may be contacted for reference, and a summary of research interests or ongoing projects to: Ifeanyi J. Arinze, Ph.D., Chairman, Department of Biochemistry, Meharry Medical College, Nashville, TN 37208. Deadline for receipt of applications is 1 April 1988. *Meharry Medical College is an Equal Opportunity/Affirmative Action Employer.*

BIOLOGICAL OCEANOGRAPHER DALHOUSIE UNIVERSITY

The Department of Oceanography at Dalhousie University in Halifax, Nova Scotia invites applications for a tenure-track position in biological oceanography, effective 1 July 1988. Applicants should have a doctoral degree in oceanography, and a strong, proven track record in quantitative approaches to biological oceanographic problems. The successful applicant would be expected to interact with physical, chemical, and geological oceanographers both at the research and teaching level. Weight will be given to those candidates whose research programs integrate a quantitative, problem-solving approach to pelagic or benthic processes into a broad oceanographic context.

Interested individuals should send a copy of their curriculum vitae, the names of at least three referees, and a brief summary of past research achievements and future goals to: Dr. A. J. Bowen, Department of Oceanography, Dalhousie University, Halifax, Nova Scotia, B3H 4J1.

Deadline for applications is 31 March 1988. *In accordance with Canadian Immigration requirements, this advertisement is directed primarily to citizens or permanent residents of Canada. Dalhousie University has a policy of Affirmative Action with respect to the employment of women faculty.*

BIOLOGY HARTWICK COLLEGE

Applications are invited for two full-time positions. Commitment to undergraduate teaching and the Ph.D. (or near completion) are required.

(i) **DEVELOPMENTAL BIOLOGY**—A tenure-track position, to teach embryology, comparative anatomy, general biology, and a new course in the area of development for non-majors, and to direct undergraduate research in animal development. A strong molecular biology background is preferred.

(ii) **ECOLOGIST**—A 3-year appointment with the possibility of renewal, to teach ecology (upper-level course for majors), evolution, forest ecology, and a course in area of expertise, and to direct undergraduate research in ecology. A strong statistical background is preferred.

Send letter of application, résumé, and three letters of reference by 26 February 1988 to: M. Richard Segina, Chair, Department of Biology, Hartwick College, Oneonta, NY 13820. *An Equal Opportunity Employer.*

POSITIONS OPEN

BOTANIST/NATURALIST, ASSISTANT PROFESSOR. Tenure-track position for an individual committed to excellence in teaching and having an intent to conduct field-oriented research with the participation of undergraduate and/or graduate students. The position includes the teaching of botany, ecology and general biology courses and coordinating of educational computing activities. Earned doctorate in a biological science demonstrated ability in research and classroom, and computer literacy are required. Send curriculum vitae, statement of research interests and names of three references to: Dr. J. Michael McCormick, Chair, Department of Biology, Montclair State College, Box C316, V-12, Upper Montclair, NJ 07043. Closing date for applications is 1 March 1988. *Montclair State College is an Equal Opportunity/Affirmative Action Institution.*

CHEMISTRY, DEPARTMENT CHAIR BALL STATE UNIVERSITY MUNCIE, INDIANA

The Chemistry Department at Ball State University invites applications and nominations for Department Chair. Candidates must have a Ph.D. in chemistry. We intend to select candidates for interviews who can teach in the areas of inorganic chemistry or biochemistry. Experience in relating electronic technology to the teaching of chemistry would also be welcome. In addition to demonstrated leadership and administrative abilities, the successful candidate will be required to develop an active research program for undergraduate and master's degree students. Our department of 13 faculty is dedicated to excellent teaching and research. We will begin evaluating applications 11 March 1988 and continue until the position is filled. *Women and minority candidates are encouraged to apply.* Send résumé, official transcripts, research plan, and three original letters of reference to: Dr. Ralph Joyner, Chair, Department of Chemistry, Ball State University, Muncie, IN 47306.

Ball State University Practices Equal Opportunity in Education and Employment.

COLLECTION MANAGER DIVISION OF FISHES

Field Museum of Natural History, Division of Fishes seeks to fill full-time staff position having primary responsibility for the maintenance and care of collection of world-wide scope. Duties include identification, curation, loan management as well as responding to scientific and public inquiries. Will also be expected to coordinate with cataloguing and skeletal preparation programs, and to supervise student and volunteer assistants. Opportunities for teaching and participation in field work and research. B.S. and 3 years of experience in major museum collection or equivalent required. Previous supervisory and computer experience desirable. Send curriculum vitae with names and telephone numbers of three references, and statement of career objectives to: Kathryn Hill, Field Museum of Natural History, Roosevelt Road at Lake Shore Drive, Chicago, IL 60605. Application deadline is 26 February 1988. *Field Museum is an Equal Opportunity Employer. Women and minorities encouraged to apply.*

DIRECTOR INTERDISCIPLINARY CENTER FOR BIOTECHNOLOGY RESEARCH THE UNIVERSITY OF FLORIDA

The University of Florida is seeking applicants for the position of Director of the Interdisciplinary Center for Biotechnology Research. The Center was founded in May 1987 to foster research and development in the molecular life sciences, and is funded by a special legislative initiative. The Director will coordinate all biotechnology activities at the University of Florida.

We invite nominations of, or applications from, individuals with an earned doctorate and a strong record of achievement in scholarship and research.

Applicants should provide curriculum vitae, a brief description of current activities, and three letters of reference to:

Roxanna M. Bruce
Office of the Vice President for Research
223 Grinter Hall
University of Florida
Gainesville, FL 32611

The closing date for applications is Friday, 1 April 1988.

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

**DEAN, DENTAL SCHOOL
THE UNIVERSITY OF TEXAS
HEALTH SCIENCE CENTER
SAN ANTONIO, TEXAS**

Nominations and applications are invited for the position of Dean of the Dental School of The University of Texas Health Science Center at San Antonio. In addition to its interest in innovative teaching, the Dental School has a special commitment to scholarship and research, an expanding program of community service, and comprehensive patient care. Teaching, research and community programs are enhanced by close integration with programs and faculty of the other schools of the Health Science Center—the Graduate School of Biomedical Sciences, the School of Medicine, the School of Allied Health and the School of Nursing. The Dental School enrolls 368 students in the undergraduate program and 91 students in the graduate residencies and Master's programs, which include Dental Diagnostic Science, Endodontics, Periodontics, Pediatric Dentistry, Prosthodontics, Oral Surgery, the General Practice Residency Program and the Advanced Education in General Dentistry Program.

Candidates must have prior experience in academic administration, planning, and fiscal matters, as well as an established record of scholarship and research. The Dean reports to the President of the Health Science Center, provides leadership for the dental school's 207 full and part-time faculty, participates in governance of the University through membership on the Health Science Center's Executive Committee, and works closely with the dental practicing community.

All nominations and applications should be received by March 31, 1988. Further information is available from and nominations and applications, including a curriculum vita, should be submitted to:

Joseph M. Berrong, D.D.S.
Chairman, Dental Dean Search Committee
The University of Texas H.S.C.
Department of General Practice
7703 Floyd Curi Drive
San Antonio, Texas 78284-7914
(512) 567-3450

The University of Texas Health Science Center at San Antonio is an Equal Opportunity/Affirmative Action Employer.

PROJECT MANAGER

■ Land and Water Quality Studies

EPRI, on the San Francisco Peninsula, an R&D firm chartered to provide research and development for all segments of the U.S. electric utility industry, seeks a senior professional to develop technical requirements and to initiate and manage research contracts in land and water quality studies. Specifically, you will develop research concepts, prepare project implementation strategies, and manage research on the environmental behavior and fate of chemicals (especially organics) discharged by utility operations.

Candidates will have a PhD/Earth Sciences (or equivalent related field), 5-10 years experience in conducting and directing research in ground-water quality and soils contamination, experience in conducting geochemical and hydrochemical experiments and modeling. Proven management ability in contract research and good communication skills required. Knowledge of electric utility industry wastes desirable.

EPRI offers a stimulating environment, competitive salaries and comprehensive benefits. For immediate consideration, please send your resume, including salary requirements, to D. Staten, Human Resources Dept. SCI-763, EPRI, 3412 Hillview Avenue, P. O. Box 10412, Palo Alto, CA 94303. An equal opportunity employer.

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RESEARCH INSTITUTE

**DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH
NATIONAL INSTITUTE OF DIABETES AND DIGESTIVE AND KIDNEY DISEASES**

OPENING DATE: January 18, 1988

CLOSING DATE: March 4, 1988

(All applications must be postmarked before closing date)

Position: Director, Division of Digestive Diseases and Nutrition

The National Institute of Diabetes and Digestive and Kidney Diseases invites nominations and applications for the position of Director, Division of Digestive Diseases and Nutrition (DDN). The candidate must be internationally recognized within the scientific community as an authority in digestive diseases. In addition, the candidate should demonstrate an interest and a commitment to nutrition research. This Institute conducts, fosters, and supports research and research training in the prevention, management, and cure of diabetes and related endocrine and metabolic diseases; kidney, urologic and hematologic diseases, and digestive diseases and nutrition. Programs encompass intramural laboratory research and extramural (grants and contracts) activities in fundamental diabetes digestive and kidney disorders.

The incumbent serves as the primary official with responsibility for planning and executing the Institute's digestive diseases and nutrition extramural programs. This includes basic and applied research, training fellowships, institutional training awards, multipurpose research centers, clinical trials, and data collection. Advises and participates with the outside voluntary health organizations and the National Advisory Council in identifying and accessing the needs and requirements for research and manpower development in the digestive diseases and nutrition disorders. Additionally, the incumbent serves as principal advisor to the Institute Director on matters and policies pertaining to these areas. Also, the incumbent will conduct intramural research projects in the areas of digestive related diseases and nutrition.

This is a Civil Service position in the Senior Executive Service (SES), with a salary range from \$64,760 to \$73,400 per annum, depending on qualifications. Currently the payable salary is limited to \$73,400. Physicians may be eligible for an additional comparability allowance up to \$10,000 per year. (Alternatively, candidates may be eligible for appointment in the Commissioned

Corps of the U.S. Public Health Service). Mandatory professional/technical qualifications are a medical degree and research program administration and/or clinical experience in digestive diseases and nutrition. Further information on these qualifications are available by contacting Mr. Syd Carter, Personnel Management Specialist, National Institute of Diabetes and Digestive and Kidney Diseases, 9000 Rockville Pike, Building 31, Room 9A30, Bethesda, Maryland 20892, (301) 496-4231.

Mandatory managerial/executive qualifications include evidence of management of a basic or clinical research program, demonstrating ability to assume leadership responsibilities in developing program goals; representing the program to outside groups; directing program planning, execution, and evaluation; and conducting a fair and equitable employment program, including the attainment of EEO objectives.

Candidates who meet the mandatory qualifications will be further evaluated by the Search Committee on the degree to which they exceed the mandatory managerial/executive qualifications, and on the following desirable qualifications: scientific reputation/peer recognition, training and education, leadership of a basic or clinical research or research administration program, and honors and awards.

APPLICATIONS (APPLICATION FOR FEDERAL EMPLOYMENT SF-171) should be sent to Mr. Clifford Moss, Executive Secretary, Search Committee for Director, DDN, Building 31, Room 9A30, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, Maryland 20892, telephone (301) 496-4231.

A current curriculum vitae and bibliography must accompany all applications. Applications from women and/or minority group members are especially solicited.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

PhD Immunologist/ Cell Biologist

Hybridoma/Monoclonal Antibodies

Abbott Laboratories. A \$4.4 billion leader in health care products recognized for exceptional management and a highly advanced scientific environment. A history of breakthrough R&D has made our Diagnostics Division the undisputed world leader in Diagnostics. Now, we seek a Scientist to participate in our aggressive research studies.

This position will involve the development of monoclonal antibodies for new immunoassay products, and will require some supervision of technical personnel. The qualified candidate will be a PhD Immunologist or Cell Biologist with at least 2-3 years experience in the production and characterization of monoclonal antibodies.

Abbott is located in an attractive suburban setting just 30 miles north of Chicago on the Lake Michigan shoreline. We offer an excellent salary and full benefits package that includes profit sharing and stock retirement plan. For consideration, send your resume including salary history in confidence to: **Peggy Taylor, Corporate Placement, Dept. SCI/2-12.** Abbott is an affirmative action employer.



ABBOTT PARK IL 60064

"HEALTH CARE WORLDWIDE"



ICRISAT
needs a

PRODUCTION AGRONOMIST at Hyderabad, India

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) seeks applications for the post of Production Agronomist. He/She will work with a team including agronomists, agroclimatologists, soil scientists and economists and will be responsible for planning and implementing a program of field research at ICRISAT Center and on farms beyond the Center in association with the national research service. Contact with similar programs in the international institutions will also be required. The program of the Production Agronomist will center on the development and testing of management systems which increase and stabilize the yield of grain and fodder from crops grown in the semi-arid tropics. Emphasis will be placed on the need for efficient resource use and for the long-term sustainability of production systems.

Essential Qualifications: A Ph.D. in agronomy or clearly related aspect of agricultural science with at least 5 to 10 years' experience in the management of crops and/or fodder species in a research institute or university. A good knowledge of English is essential and preference will be given to candidates with experience of tropical agriculture and of trials on farms.

The position is for 2 years with possibility of extension. Salary at principal staff level, according to qualifications and experience.

Send resumé, including present salary level and names of three references within 60 days from the date of the advertisement, to: **The Director General, ICRISAT, Patancheru, A.P. 502 324, India.**

Postdoc in Protein Biochemistry

Genentech, Inc., a leader in the field of biotechnology, is currently seeking a Postdoc in Protein Biochemistry to characterize growth hormone binding and signal transduction by the growth hormone receptor. To qualify, you should be able to apply a variety of methods to the purified, solubilized receptor including spectroscopic analysis, chemical modification, monoclonal antibody mapping, limited proteolysis and conformational analysis. A background in chemistry and experience with receptors or membrane proteins would be a plus.

Genentech, Inc. offers an excellent salary and benefits package, coupled with the opportunity to make a significant contribution to our organization. Please send resume to: Sherrie D.L. Wilkins, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. An equal opportunity employer.

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Manager of Toxicology and Animal Research

XOMA Corporation, a leading biotechnology company located in the San Francisco Bay Area is currently in search of a PhD to assume the scientific & administrative direction of the Toxicology & Animal Research Department. This hands-on manager will be responsible for acute and subchronic toxicology studies under GLP guidelines, pharmacokinetic and tissue distribution studies and efficacy studies using model systems appropriate for product development programs.

The ideal candidate will possess a PhD in Pharmacology, Toxicology or related discipline. 3-5 years post doctoral experience and experience with tumor model systems and GLP toxicology studies.

To explore this opportunity further please send your CV and salary history to:

Director of Human Resources
XOMA Corporation
2910 7th St.
Berkeley, CA 94710

EOE



XOMA
CORPORATION

DIRECTOR OF CLINICAL RESEARCH

Nelson Research & Development Company headquartered on the University of California campus in Irvine — adjacent to the medical school — is a small, highly creative research company committed to the discovery and development of new drugs.

Our recent acquisition by the Ethyl Corporation affords us the opportunity to expand our Product Development activities. As part of this expansion, we have the need for a dynamic individual to head our Clinical Research Department.

Reporting to the Vice President of Development, you will be responsible for initiating, planning and coordinating all clinical trials to support product registration of our novel therapeutic agents worldwide.

The ideal candidate will hold a Ph.D., or M.D. and will have a minimum of 5 years industrial experience or a demonstrated academic research achievement in a clinical facility. Excellent oral and written communication skills are obviously essential.

The position offers a rare challenge and unique opportunity for professional growth along with the chance to contribute to the overall success of a growing Company.

Nelson Research offers a professional environment and competitive salary and benefits. Interested candidates may send their resume with salary history to:

Personnel Manager
Nelson Research & Development Company
1001 Health Sciences Rd. West
Irvine, CA 92715

An Equal Opportunity Employer

SENIOR ASSISTANT SCIENTIST PHARMACOLOGY

Parke-Davis Pharmaceutical Research Division, Warner-Lambert Company has an immediate opening for a research scientist for our cardiovascular drug discovery/development program. This individual will assist in developing testing procedures, conduct experiments, analyze experimental data, and prepare research reports. The successful candidate will have a strong background in cardiovascular research and will possess the requisite technical skills.

QUALIFICATIONS: MS in physiology or pharmacology with emphasis in cardiovascular research, or BS with 2-3 years of experience in cardiovascular pharmacology. Experience working with laboratory animals and good communication skills are essential.

Qualified applicants should send resume/curriculum vitae in confidence to: Ms. Sharon Moorehead, Parke-Davis, 2800 Plymouth Rd., Ann Arbor, Michigan 48105.

"EQUAL OPPORTUNITY IN ACTION"

PARKE-DAVIS

DIVISION OF WARNER-LAMBERT COMPANY



OUR LABORATORIES ALSO DEVELOP SUCCESSFUL CAREERS PHARMACEUTICAL SCIENTISTS

Glaxo Inc. is one of the premier research based pharmaceutical companies in America. Ranked in the nation's Top 10, we are a technically advanced force for innovation that is constantly adding new and important ethical and proprietary pharmaceuticals to its long list of successes.

We are offering important, career expanding positions in our Pharmaceuticals Department to Scientists who would like to be involved with the newest technology, the most challenging projects, and major new product introductions.

Join us in one of these challenging positions in Research Triangle Park, N.C. (near Raleigh/Durham)

RESEARCH ASSISTANTS, ASSOCIATES, AND RESEARCH SCIENTISTS Product Formulation / Clinical Supplies Manufacturing

Candidates will be involved with all phases of Glaxo's diversified R&D dosage form development programs. Familiarity with CGMP's, clinical supplies manufacture and product scale-up is required. Manufacturing experience is desirable. These positions offer excellent opportunities for world-wide travel.

Candidates responding to this position should refer to Job # Pb.D. on all resumes.

CLINICAL SUPPLIES PROJECT LEADER Clinical Packaging and Supplies

Working in our Pharmaceutical Development Department, you will be responsible for coordinating Pharmaceuticals, Analytical Chemistry, Medical, Biostatistics and Regulatory Affairs clinical development supplies activities; coordinating clinical supplies inventories obtained from contract suppliers and our United Kingdom parent; and, assisting in the clinical packaging and labeling study design. This is an excellent opportunity for travel to contract manufacturers, packagers and to Glaxo U.K.

Qualified candidate must have a BS in Pharmacy or related field with 2-5 years relevant pharmaceutical industry experience. Must have excellent oral and written communication skills and organizational skills.

Candidates responding to this position should refer to Job # Pb.D. - 1 on all resumes.

At Glaxo, growth opportunities are complemented by a location that has excellent resources in close proximity. Prestigious universities, scenic vistas, lively recreational areas, and exciting cultural opportunities... all a part of the daily life of the Glaxo professional.

Further, we reward talent and creativity with excellent salaries, comprehensive benefits programs (including a completely equipped, on-site athletic facility) and rapid recognition. Candidates interested in these positions, please send your resume, including salary history and CORRESPONDING JOB # AS MENTIONED ABOVE, to:

Human Resources Department

Glaxo Inc.

PO Box 13398
Research Triangle Park, N.C. 27709

(No Phone Calls, Please)
No Private Agency Referrals, Please
An Equal Opportunity Employer M/F/H/V

Paving the way to a healthier world.

POSITIONS OPEN

CHAIR, DEPARTMENT OF BIOCHEMICAL PHARMACOLOGY

The School of Pharmacy of the State University of New York at Buffalo invites nominations and applications for the position of Chair, Department of Biochemical Pharmacology. The appointee should hold a Ph.D. or M.D. degree and have an established, funded and creative research program in an area of molecular pharmacology. The School of Pharmacy offers an already stimulating research environment in its graduate departments of Biochemical Pharmacology, Medicinal Chemistry and Pharmaceutics and plans to strengthen, in collaboration with the Department of Biology, its research capabilities in appropriate areas of molecular biology. The appointment will be made at the level of associate or full professor and opportunities exist for additional faculty appointments. Applications and nominations should be submitted by 15 April 1988: **David J. Trigg, Ph.D., Dean, School of Pharmacy, State University of New York at Buffalo, 126 Cooke Hall, Buffalo, NY 14260.**

The State University of New York at Buffalo is an Equal Opportunity/Affirmative Action Employer.

UNIVERSITY OF OTAGO DUNEDIN—NEW ZEALAND CHAIR OF PHYSICS

Applications are invited for appointment to a Chair in the Department of Physics. Applicants should have a substantial research record in some area or areas of physics, preferably in a field with some broad connection to those fields currently pursued in the department—atomic and laser physics, the physics of the magnetosphere and the earth's environment, thin-film optics, energy physics, medical physics.

Professorial salaries are presently paid within the range \$NZ68,000 to \$NZ85,000 per annum.

Further particulars are available from the undersigned, **P.O. Box 56, Dunedin, New Zealand.**

Applications quoting reference number A87/85 close with the Registrar on 31 March 1988, or as soon as possible thereafter. **D. W. Girvan, Registrar.**

CYTOSKELETON POSTDOCTORAL POSITION

Postdoctoral position is available to study cytoskeletal reorganization in living cells. Questions to be examined include cell motility, cell division, membrane-cytoskeleton interactions, oncogenic transformation, and myogenesis. The approach involves state-of-the-art methods of fluorescence microscopy, microinjection, image intensification, digital image processing and fluorescence photobleaching.

Applicants should submit curriculum vitae, descriptions of previous research with reprints, and three letters of recommendation to: **Dr. Yu-li Wang, c/o Personnel Office, Cell Biology Group, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.**

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

DEAN, COLLEGE OF LIFE SCIENCES AND AGRICULTURE UNIVERSITY OF NEW HAMPSHIRE (UNH)

UNH seeks an energetic/innovative leader for its newly restructured College of Life Sciences and Agriculture which now includes all eight biological science departments, as well as departments with emphases in agriculture and natural resources. UNH is both a Land Grant/Sea Grant institution, with a total enrollment of approximately 10,500. In addition to 10 departments with 25 major curricula leading to B.S. or B.A. degrees, 13 M.S. programs, and 7 Ph.D. programs, the Dean has responsibility for the New Hampshire Agriculture Experiment Station and the Thompson School of Applied Science, which offers six 2-year programs leading to an A.A. degree. Applicants should possess an earned doctorate, a record of successful teaching/scholarly achievement and demonstrated talent for administration. A letter of interest, curriculum vitae, and the names of five references are requested. Non-citizens must include current visa status. Salary will be competitive and commensurate with experience. Nominations and applications should be sent to: **Joan Weeks, Secretary, Office of VP for Academic Affairs, Thompson Hall, University of New Hampshire, Durham, NH 03824.** Application screening begins 29 January 1988 and applications will be accepted until the position is filled. *UNH is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

COUNTY DIRECTOR/ADVISOR: The University of California, Division of Agriculture and Natural Resources, Cooperative Extension (CE) is seeking a career-track academic candidate who is responsible for the conduct of CE Program in Colusa Co. Administer, direct and provide leadership. Develop and implement an educational program. A minimum of master's degree or equivalent combination of education and experience in one of the following areas: Home economics, human development, consumer science, or in other disciplines applicable to CE in Colusa County is required. Five years of experience at the county level preferred. Assure Affirmative Action in development and delivery of programs. Salary in the assistant through associate advisor rank. For complete description, contact: **CE Personnel, 6th Floor, 2120 University Avenue, Berkeley, CA 94720. Telephone: 415-644-4320.** Closes 4 March 1988. Refer #A-87-180. *Affirmative Action/Equal Opportunity Employer M/F/H.*

DEAN, COLLEGE OF LIBERAL ARTS AND SCIENCES

The University of Colorado at Denver seeks a person to provide vigorous academic leadership and direction for the faculty of the College of Liberal Arts and Sciences in an institution committed to excellence in research/creative work and teaching. Appointment is planned for no later than the fall of 1988.

Please send nominations and applications, which include a letter and an up-to-date curriculum vitae by 4 March 1988 to: **Dr. Bruce W. Bergland, Chair, CLAS Dean Search Committee, University of Colorado at Denver, 1200 Larimer Street, Campus Box 168-C, Denver, CO 80204-5300.**

The University of Colorado at Denver is an Equal Opportunity/Affirmative Action Employer

DIRECTOR, DIVISION OF INFECTIOUS DISEASES: The Department of Internal Medicine of St. Louis University School of Medicine invites applications and nominations for the position of Director of its Division of Infectious Diseases. We seek a physician-scientist with a substantial publication record and a history of peer-reviewed grant support. The Director will be responsible for developing and leading a vigorous research-oriented Division. Generous new research space and financial support will be provided. Please forward nominations and applications to: **Coy D. Fitch, M.D., Chairman, Department of Internal Medicine, St. Louis University School of Medicine, 1325 South Grand Boulevard, St. Louis, MO 63104.** *Equal Opportunity Employer M/F/V/H.*

ENVIRONMENTAL STUDIES: The Environmental Studies Program at Williams College seeks a 1-year sabbatical leave replacement for 1988 to 1989 with the possibility that a regular opening will occur in the following year. Teaching responsibilities will include courses in the candidate's field, including one with a policy focus and probably an introductory course. The candidate is expected to have a Ph.D. degree or equivalent, and experience in the environmental field. Rank and field are open, but preference will be given to candidates with a background in public policy, environmental law or engineering, geography or human ecology.

Excellent facilities for scholarly research are available. Send curriculum vitae and the names of three references to: **Professor William R. Moomaw, Director, Center for Environmental Studies, Williams College, Williamstown, MA 01267.** Applications should be received by 29 February 1988. *Williams is particularly interested in attracting women and minority candidates.*

The School for Field Studies (SFS) seeks innovative **FACULTY** (Ph.D./M.S., field leadership, and relevant research experience) for undergraduate 1-month summer courses on Acid Rain (Northeast United States), Coral Reef Ecology (Virgin Islands), Alpine Ibex Behavioral Ecology (Switzerland), Deforestation (Costa Rica), Humpback Whale Ecology (Gulf of Maine), Ecology of Seabirds (Scotland), Coastal Ecology (Sardinia) and Landscape Ecology (Colorado). Salary: Senior faculty \$2100 to \$2400; associate faculty \$1300 to \$1600 per course plus travel/field expenses. Send letter, curriculum vitae, and three references to: **Program Director, SFS, 376 Hale Street, Beverly, MA 01915.** *Equal Opportunity Employer.*

POSITIONS OPEN

EUKARYOTIC CELL BIOLOGIST

Indiana University of Pennsylvania and the Biology Department invites applications for a tenure-track position at the assistant/associate professor level in eukaryotic cell biology starting fall 1988.

Qualifications: Ph.D., and should have teaching experience and a strong research record. Commitment to quality teaching and research is essential. Preference will be given to applicants with a specialty in the molecular biology of yeast.

Duties: Will include teaching undergraduate cell physiology, M.S. level graduate courses, establishing a quality research program, and teaching department general course offerings.

Submit letter of application, résumé, undergraduate/graduate transcripts, statement of research goals, and three letters of reference to: **Dr. William E. Dietrich, Jr., Cellular Biology Search Committee, Biology Department, Indiana University of Pennsylvania, Indiana, PA 15705.** Application deadline has been extended to 1 March 1988. *Minority applicants are encouraged to apply.*

IUP is an Affirmative Action/Equal Opportunity.

EXPERIMENTAL ZOOLOGIST

Applications are requested for a junior-level faculty position (tenure-track assistant professor, depending upon experience) in a research division devoted to the study of cephalopods (presently four faculty, total 18 personnel). Within the division is a large mariculture facility in which numerous cephalopod species are cultured throughout the year. Faculty and staff expertise lie mainly in the areas of animal behavior, neuroscience, nutritional biochemistry, and pathology. Considerable potential exists for productive, interdisciplinary collaboration. Applicants should have a background in zoology, postdoctoral training, and specific experience in aquatic animal physiology. Preference will be given to candidates with interests in postembryonic developmental studies related to physiology. The successful applicant will be expected to maintain a vigorous research program and conduct a minor amount of teaching at the graduate level. Please send curriculum vitae, names, and addresses of three references and a description of future research goals to: **Roger T. Hanlon, Ph.D., Chief, Division of Biology and Marine Resources, Marine Biomedical Institute, University of Texas Medical Branch, 200 University Boulevard, Galveston, TX 77550-2772.** *UTMB is an Equal Opportunity Employer.*

FACULTY POSITIONS IN APPLIED BIOCHEMISTRY/ MOLECULAR BIOLOGY OREGON GRADUATE CENTER

The Oregon Graduate Center is expanding its program in bioconversion technology. We are inviting applications for the following positions:

FUNGAL/YEAST MOLECULAR BIOLOGIST: Experience in gene expression/regulation, protein secretion, or biodegradation with novel organisms.

MICROBIAL BIOCHEMIST: Background in biochemistry and/or molecular biology with experience in the degradation/transformation of natural or xenobiotic compounds.

PROTEIN BIOCHEMIST/ENGINEER: Background in protein chemistry, enzymology, immunology and/or genetic engineering. Prefer candidates with experience in utilizing molecular genetics to study structure-function relationships with enzymes.

PLANT BIOCHEMIST/MOLECULAR BIOLOGIST: Candidates with experience in the enzymology, secondary metabolism or host-microbe interactions of higher plants, and/or molecular biology of forest trees are particularly encouraged to apply.

Requirements: Ph.D., several years of postdoctoral experience, and ability to develop a strong research program and graduate level courses in areas of specialty. Appointments will be made at the level of assistant professor or higher depending on qualifications.

Send curriculum vitae, a statement of research interests, and the names, addresses, and telephone numbers of three references by 1 March 1988 to: **Dr. Michael H. Gold, Search Committee Chair, Department of Chemical and Biological Sciences, Oregon Graduate Center, 19600 N.W. Von Neumann Drive, Beaverton, OR 97006-1999.** *Equal Opportunity Employer.*

Animal Cell and Microbial Fermentation Scale-Up

The Department of Biological Process Sciences is inviting highly qualified scientists and engineers to join a multidisciplinary team responsible for fermentation processes involving recombinant microbial and animal cells. The Department develops cell lines, gene expression systems, and fermentation technologies suitable for scaling-up to pilot plant and manufacturing capacities. Current projects are concerned with tissue plasminogen activator, second generation thrombolytics, and therapeutics for AIDS. All staff are expected to conduct self-initiated research with general applications as well as research which supports specific product opportunities. Department staff will be located within a new 70,000 ft² Biopharmaceutical Pilot Facility to be commissioned later this year.

The following positions are available:

Associate Senior Investigator/ Cell Biology

This scientist will conduct research in the area of the animal cell physiology and will complement genetics strategies aimed at producing high, stable expression systems in low serum or serum-free media suitable for large-scale processes. Applicants must have a Ph.D. in Cell Biology or a related discipline, 1-3 years of postdoctoral experience, a growing publication record in areas relevant to this position, and well developed communication and interpersonal skills. Refer to position #412.

Scientist/Microbial Physiology

This position will be concerned with the influence of microbial physiology on the expression of heterologous proteins in *Escherichia coli*, yeast and *Streptomyces* in fermentation reactors. Candidates must have a MS in Microbiology or related discipline and modern fermentation equipment. Candidates with a BS and 2-3 years of pertinent experience will also be considered. Refer to position #436.

Associate Scientist/Fermentation Technology

This person will conceive and evaluate new process control strategies to optimize microbial fermentations producing recombinant products in a state-of-the-art computer controlled pilot plant. Candidates must have a BS in Biochemical or Chemical Engineering including coursework in microbiology and biochemistry, or a BS in Microbiology including coursework in engineering related subjects. A background in process control and computer programming is required and experience with process control instrumentation is desirable. Refer to position #17.

Postdoctoral Scientist/Microbiology or Genetics

A scientist is sought to study the production of proteases in *Streptomyces* and their role in the accumulation of recombinant products. Candidates for this position must have a strong research background in microbial physiology, enzyme regulation, and/or regulation of protein degradation. Special consideration will be given to candidates with experience in *Streptomyces* physiology. This person will work closely with members of the *Streptomyces* gene expression group within the Department of Molecular Genetics. Our postdoctoral appointments are normally for a two year duration. Refer to position #19.

Biological Process Sciences is part of the Biopharmaceutical R&D Area within Smith Kline & French Laboratories, located in suburban Philadelphia, Pennsylvania. We offer excellent compensation, benefits, and relocation packages as well as opportunities for personal and professional growth. Please forward your C.V., the names of three references, and the appropriate position reference number to: Robert F. Obst, Manager, Personnel Relations, R0123, Research and Development Division, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

SK&F
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Postdoctoral Fellow

Seeking a Postdoctoral Fellow to participate in the mutagenesis and mammalian cell expression of the envelope glycoprotein of the HIV-1 retrovirus within an ongoing collaborative project between Dr. Phillip Berman of Genentech, Inc. and Dr. Don Wiley of Harvard University.

Competence in recombinant DNA technology and an interest in protein structure are essential. Experience in protein chemistry and/or immunology is desirable. This grant funded position will be available in early 1988. It is anticipated that the great majority of time will be spent at Genentech, Inc. in South San Francisco with an opportunity to also spend time at Harvard University in Cambridge.

Please send a resume of educational background, experience and publications, with the names of three references to: Dr. Phillip Berman, Department of Molecular Biology and Immunology, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. An equal opportunity employer.

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DIRECTOR

OAK RIDGE NATIONAL LABORATORY

The Oak Ridge National Laboratory invites nominations and applications for the position of Director of the Laboratory. With a staff of over 4300, ORNL is the largest multiprogram energy laboratory in the U.S. Department of Energy R&D system. The Laboratory's primary missions are (1) to conduct applied research and engineering development in support of DOE's programs in fusion, fission, conservation, fossil, and other energy technologies and (2) to perform basic scientific research in selected areas of the physical and life sciences. The Search Committee is seeking candidates who have demonstrated management and leadership abilities and a distinguished record of achievement in scientific or engineering research. All communications should be sent to **Dr. M. W. Rosenthal, Oak Ridge National Laboratory, Building 4500N, Post Office Box X, Oak Ridge, TN 37831-6241**. All applications must be received no later than **March 15, 1988**.

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U.S. Citizenship Required (Security clearance will be required)

GRADUATE OPPORTUNITIES

In Space Biology



The DIVISION OF BIOLOGY at KANSAS STATE UNIVERSITY is offering an exciting opportunity for you in BIOSERVE SPACE TECHNOLOGIES, a NASA CENTER FOR THE COMMERCIAL DEVELOPMENT OF SPACE. Graduate assistantships, with an annual stipend of \$10,200, are being awarded to qualified students for studies that combine interests in SPACE with research careers in BIOLOGY.

Applications are invited for graduate studies in:

- virology & oncology
- microbiology & immunology
- cell & developmental biology
- molecular biology & genetics
- physiology & ecology

For further information write:

BIOSERVE SPACE TECHNOLOGIES
DIVISION OF BIOLOGY—ACKERT HALL
KANSAS STATE UNIVERSITY
MANHATTAN, KS 66506

KSU is an equal opportunity/affirmative action employer

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Link your professional future to BERLEX Laboratories, a growing pharmaceutical company and a leader in pharmaceutical R&D. This current oppty offers challenge, recognition, and generous rewards for individuals with experience in animal models of reperfusion injury, myocardial salvage, or infarct size determination to develop a research program in cytoprotection and reduction/prevention of myocardial ischemia. Experience with in vivo methods in cardiac electrophysiology is desirable, but not essential.

The position requires a Ph.D. with 1 or more years of relevant post-doctoral experience. The successful applicant will have demonstrated a high degree of scientific creativity, excellent communications skills, and the ability to work in a team environment, supervising a small group of scientists.

BERLEX provides a generous salary, comprehensive benefits, and unusual opportunities for growth. Send your CV with salary history, in strict confidence, to: Attn: **LILA BERNSTEIN**, Manager, Human Resources R&D, **BERLEX LABORATORIES, INC.**, 110 E. Hanover Avenue, Cedar Knolls, New Jersey 07927. Equal Opportunity Employer M/W/H.

BERLEX
Laboratories, Inc.

FACULTY POSITIONS IN RADIOLOGICAL SCIENCES

DEPARTMENT OF NUCLEAR ENGINEERING

The Department of Nuclear Engineering at MIT requests applications for two positions in the area of radiological sciences. The positions will be on a tenure track with a 3-year appointment as assistant or associate professor to be determined by the qualifications of the successful candidates. These successful candidates will be members of the Radiation Science and Technology program of the Nuclear Engineering Department and may also have adjunct appointments in the Whitaker College of Health Sciences, Technology and Management depending on their interests and qualifications. Candidates should hold a Ph.D. or Sc.D. in an engineering or physical sciences specialty and should have experience in radiation production, detection, dosimetry and/or application. Candidates for one of the positions should have a broad interest in the physics and engineering of radiation therapy including systems for radiation delivery, dosimetry, treatment planning and related computer applications. Candidates for the other position should be interested in a broad range of topics dealing with medical imaging and diagnostic applications of radiation.

Independent of the area of research, the candidates should be capable of mounting an extensive research program and obtaining support. The program should interact with and expand other activities in the Nuclear Engineering Department involving nuclear reactions. The candidates should be capable of teaching a wide range of courses in the academic areas of radiation science and technology including radiation and radioisotope applications and experimental nuclear physics and should be able to assist in the radiation health physics curriculum. The teaching activities will form an integral part of the radiological sciences program and the successful candidates will have responsibilities for the supervision of student research including master's and doctoral research.

Candidates for both positions are strongly encouraged to include utilization of the MIT Research Reactor in the formulation of their proposed teaching and research activities. Both candidates should also be able to integrate their research and teaching with other aspects of the department's radiological sciences program such as biomedical imaging and diagnosis. Effective collaboration with other relevant groups in the Boston area is important. MIT is a non-smoking environment.

Please submit curriculum vitae to: Professor Gordon L. Brownell, Massachusetts Institute of Technology, Whitaker College of Health Sciences, Technology and Management, Room E25-330B, Cambridge, Massachusetts 02139.

MIT is an Equal Opportunity/Affirmative Action Employer

A COMMUNITY AT WORK



Molecular Biology Research BS/MS

The Molecular Biology Research Group, part of Upjohn's expanding Biotechnology program, is responsible for conducting basic research in molecular biology and collaborating with scientists throughout Upjohn. We are seeking Research Associates at the BS or MS degree levels with relevant research experiences, demonstrated skills in experimental design, state-of-the-art analyses and interpretation of data for the following positions:

Mammalian Cell Molecular Biology:

Experience in basic recombinant DNA techniques and mammalian cell culture is required; a background in virology studies is highly desirable; this position will involve research on regulation of viral gene expression.

Atherosclerosis and Thrombosis: Position requires a BS or MS degree in Biochemistry or related field, and research experience in recombinant DNA techniques; experience in cDNA synthesis, protein purification and/or mammalian cell expression techniques is highly desirable.

Nucleotide Sequencing Analyses: Participate in collaborative DNA sequencing projects; perform manipulations of recombinant DNA and large DNA

sequencing projects, prepare data analysis using computer and assist in implementation of new methodology.

Plant Molecular Biology: Develop plant gene transfer systems for crop-species; a BS or MS in plant cell biology, plant molecular biology, or other related area desirable; experience in plant tissue culture and regeneration methods required; knowledge of plant molecular biology, DNA cloning and transformation systems helpful.

Kalamazoo is located in Southwestern Michigan midway between Chicago and Detroit and offers varied cultural events, cosmopolitan shopping and entertainment, lakes and woodlands minutes away, abundant year-round sports and recreation. Upjohn offers advancement opportunities, a highly competitive salary commensurate with experience, comprehensive benefits and relocation assistance. For prompt, confidential consideration, please send your curriculum vitae to M. William Rex, Employment Representative, The Upjohn Company, 7000 Portage Road, Kalamazoo, MI 49001. Please refer to advertisement number 1791-A in your correspondence. An Equal Opportunity Employer, M/F.

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POSITIONS OPEN

Santa Monica College is recruiting for a full-time tenure-track **FACULTY POSITION** to teach Astronomy. This position requires a master's degree in astronomy, planetary or space science and a valid California Community College Credential. College level teaching experience in astronomy lecture and laboratory courses is preferred. Start date is 13 September 1988 with a salary range of \$23,339 to \$46,680, based upon academic preparation and teaching experience. District application must be received by 7 March 1988. Contact: **Santa Monica College, Office of Personnel Services, 1900 Pico Boulevard, Santa Monica, CA 90405. Telephone: 213-452-9336. Equal Opportunity Employer.**

FACULTY POSITIONS IN MOLECULAR NEUROBIOLOGY

Applications and nominations of individuals with active research programs in molecular neurobiology are requested for faculty positions at the full, associate, or assistant professor level. Rank and salary will be based on academic and research record. Substantial start-up funds and modern laboratory space are available. Excellent opportunities exist for interaction with neuroscience and molecular biology faculty associated with formal neuroscience and genetics programs as well as from basic science and clinical departments. Minimum requirements include the Ph.D. and/or M.D. degree, and 2 years of postdoctoral training. Candidates should send curriculum vitae, a description of research activities, representative reprints, and the names of three or more references to:

Dr. Peter Getting
Department of Physiology and Biophysics
The University of Iowa
Iowa City, IA 52242

GROWTH FACTORS RESEARCH AND DEVELOPMENT

Otisville BioPharm, a growth-oriented company, has the following challenging positions available in the field of:

CELL BIOLOGIST—Senior position. Applicant should have extensive experience in mammalian cell culture, with hematopoietic and tumor cells.

QUALITY CONTROL AND ASSURANCE SUPERVISOR—Must be experienced in virus, mycoplasma detection and GMP's.

BIOCHEMICAL RESEARCH ASSISTANT—Must be experienced in biochemical techniques, chromatography and electrophoresis.

Otisville BioPharm, Inc.
P.O. Box 567
Otisville, NY 10963
914-386-2891

IMMUNOLOGIST

Tenure-track assistant professorship anticipated beginning August 1988. The Ph.D. degree is required in immunology, or cellular immunology with postdoctoral experience favored. The individual will be expected to develop a research and graduate program within some area of modern immunology and teach an undergraduate and graduate course in immunology. A commitment to excellence in research and teaching is required. To assure full consideration, send curriculum vitae, statement of research goals, and the names of three references by 1 April 1988 to: **Dr. Glenn Todd, Head, Department of Botany and Microbiology, Oklahoma State University, Stillwater, OK 74078. An Equal Opportunity/Affirmative Action Employer.**

INSTRUCTOR IN MEDICINE needed to design and conduct kinetic experiments of photobleaching of nucleic acids, fluorescent dyes and chromosomes; write and validate computer programs in Fortran and C for multi-compartment, multi-component kinetic analysis; formulate mathematical models of kinetic processes and test these theories by computer simulation and statistical error analysis. Instruct postdoctoral fellows and graduate students in usage of digital imaging data processing software. Must have Ph.D. degree in chemistry, with 2 years of experience in research in chemistry and applied mathematics. Salary \$28,080 per year; 40 hours per week. Apply at: **The Texas Employment Commission, Houston, TX**, or send résumé to: **The Texas Employment Commission, TEC Building, Austin, TX 78778, J.O. #4422587. Ad paid by an Equal Employment Opportunity Employer.**

POSITIONS OPEN

HARRINGTON CANCER CENTER IMMUNOLOGY POSITIONS

The Harrington Cancer Center, a non-profit, ambulatory treatment center located in Amarillo, Texas is expanding its research capability, and anticipates two positions in the area of molecular immunology. One position would be an upper level (equivalent to an assistant or associate professor) for an individual experienced in flow cytometry. This position would include responsibility for running the clinical flow cytometry laboratory in addition to initiating an independent research program. The second position would be for an individual at the post-doctoral level, and would be for research in the area of monoclonal antibodies directed against B cell tumors. These individuals will join an already established immunology group at the Harrington Center, The Texas Tech Regional Academic Health Sciences Center and the Amarillo Veterans' Administration Hospital.

To apply for these positions, please send curriculum vitae to:

Dr. K. John Morrow, Jr.
Department of Biochemistry
Texas Tech University Health Sciences Center
Lubbock, TX 79430

MRI/MRS EDUCATIONAL DIRECTOR. The Department of Radiology of the Hospital of the University of Pennsylvania is seeking applicants for a faculty position as Director of MR Education in the Department of Radiology. This individual will direct ongoing continuing education programs in magnetic resonance imaging and spectroscopy for physicians and technologists, and will also have the opportunity to pursue an active research program in MRI/MRS. Applicants should have demonstrated research and teaching experience in MRI/MRS, as well as outstanding written and verbal communication skills. Rank and salary commensurate with experience. Send curriculum vitae to: **Herbert Y. Kressel, M.D., Chief, Magnetic Resonance Imaging, Hospital of the University of Pennsylvania, 3400 Spruce Street, Philadelphia, PA 19104. The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer. Qualified female and minority candidates are encouraged to apply.**

MANAGER, PILOT PLANT, PENN STATE BIOTECHNOLOGY INSTITUTE

The Penn State University seeks an individual to supervise the design, construction, and operation of a major new pilot plant as part of the expanding activities of its Biotechnology Institute. Individual will report to the institute director, but will have the ability to work independently with architects, equipment manufacturers and users from the university and private sector. Experience in design and operation of pilot plants and process development is required. Experience with scale-up of biological processes, especially genetically engineered cells, preferred. Supervisory experience desirable. Send application letter and résumé to: **Dr. Jean E. Brechley, Director, Penn State Biotechnology Institute, 519A Biotechnology Headquarters Building, University Park, PA 16802. Review of applications will begin 15 March 1988 and continue until the position is filled. An Equal Opportunity/Affirmative Action Employer.**

MEDICAL DIRECTOR

Position immediately available for M.D./Ph.D. to head clinical evaluation program of new diagnostic agents for a subsidiary of a major worldwide manufacturer of medical products. Please forward curriculum vitae to: **M. Sovak, M.D., 3333 North Torrey Pines Court #100, La Jolla, CA 92037.**

MICROSCOPIC ANATOMIST OR VETERINARY PATHOLOGIST/TOXICOLOGIST. Ph.D. or D.V.M./Ph.D. to teach microscopic anatomy and develop an extramurally funded research program. Send letter, résumé, and names of three references: **N. E. Hutton, Veterinary Medicine, Oregon State University, Corvallis, OR 97331, before 15 March 1988. Equal Employment Opportunity/Affirmative Action Employer, complies Section 504 Rehabilitation Act of 1973 and responsive to dual-career couples.**

POSITIONS OPEN

The Centers for Disease Control is seeking a **MEDICAL VIROLOGIST** with M.D. or equivalent degree to work with biosafety level 4 viruses (including Lassa, Ebola, Marburg, Congo Crimean hemorrhagic fever and Hantaan viruses) in a Maximum Containment Laboratory and under field conditions. Must have a minimum of 3 years of laboratory experience in virology including 2 years of working with biosafety level 4 viruses, including isolation and purification of viruses, as well as experience in designing and conducting experiments on disease pathogenesis, utilizing current concepts and techniques in virology, immunology, hematology, and physiology under biosafety level 4 conditions. Must have at least 1 year of clinical and epidemiologic experience with viral hemorrhagic fevers including therapy and study of pathophysiology of disease in humans. Must be willing to travel internationally in order to organize and conduct epidemic investigations, set up field and clinical studies in remote areas. Must be able to direct laboratory group on studies of diagnosis, immunology and pathogenesis of viral hemorrhagic fevers, and have experience in evaluation of vaccines in primates. Fluency in French and at least one other foreign language is highly desirable. Preferred candidates should have an earned doctoral degree (M.D., Ph.D. or equivalent) and a record of distinguished service research. Salary level \$45,763 to \$50,338, commensurate with experience. Interested applicants should submit curriculum vitae and names of three professional references to: **Sharlyn Wilkinson, Personnel Management Office, Room 1058, Centers for Disease Control, 1600 Clifton Road, Atlanta, GA 30333. Telephone: 404-639-3274. CDC is an Equal Opportunity Employer and provides a smoke-free work environment.**

MOLECULAR BIOLOGIST

The Research Division of Henry Ford Hospital invites applications for the position of senior staff investigator in molecular biology. Persons interested in oncogene regulation or transplantation immunology are particularly encouraged to apply, although strong applications using molecular biological approaches in research areas broadly related to human disease will be considered. Substantial resources will be available including the possibility of academic affiliations.

Applicants should have completed several years of postdoctoral study, and will be expected to develop a strong research program capable of attracting extramural funding. Curriculum vitae and the names of three references should be sent to:

Dr. Leonard C. Lutter, Chairman
Molecular Biology Search Committee
Research Division
Henry Ford Hospital
2799 West Grand Boulevard
Detroit, MI 48202

MOLECULAR BIOLOGIST

The Division of Rheumatology, Department of Medicine, at the University of Colorado Health Sciences Center, invites applications for a position at the beginning faculty level. Applicants should have completed at least 2 years of postdoctoral work with experience in the regulation of gene expression. The position is full-time research in a laboratory interested in regulation of synthesis of interleukin 1 in human monocytes. The position is available in 1988 with applications considered through the end of April. Salary and start-up funds will be provided but the appointee will be expected to participate in applying for research support. Please submit curriculum vitae, summary of research experiences, and a list of four references to: **William P. Arend, M.D., Professor and Head, Division of Rheumatology, University of Colorado Health Sciences Center, Box B115, 4200 East Ninth Avenue, Denver, CO 80262. The University of Colorado is an Affirmative Action/Equal Opportunity Employer.**

MOLECULAR BIOLOGY RESEARCH TECHNICIAN—B.S./M.S. or equivalent, with experience in plant transformation, regulation of gene expression, gene cloning and/or vector construction. Emphasis on tissue-specific and developmentally regulated expression of foreign genes in plants with the long-term goal of crop improvement. Send résumé and three references to: **Dr. Gary Huffman, Department of Biotechnology Research, Pioneer Hi-Bred International, Box 38, Johnston, IA 50131. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

MOLECULAR GENETICIST (M.D. or M.D.—Ph.D.) wanted as Chief of new Genetics Division in the Department of Pediatrics of Case Western Reserve University School of Medicine at Rainbow Babies and Childrens Hospital. Incumbent will be expected to develop and recruit additional faculty for independent research program to complement present strength in epithelial cell biology, cystic fibrosis, immunology and neonatal metabolism and to interface with science department. Preference will be given to a clinically trained physician-scientist who will develop research training opportunities in molecular genetics within the Department of Pediatrics. Faculty rank/salary commensurate with experience. *Qualified women and minority group members are encouraged to apply.* Contact: M. Berger, M.D., Ph.D., Department of Pediatrics, Case Western Reserve University School of Medicine, 2074 Abington Road, Cleveland, OH 44106. Telephone: 216-844-3237. CWRU is an Equal Opportunity/Affirmative Action Employer.

MOLECULAR GENETICIST

Postdoctoral position available immediately to study genes involved in sister chromatid recombination and chromosome segregation in *Drosophila*. Experience in genetics and molecular biology desired. Send curriculum vitae and names of three references to: Dr. Sharyn Endow, Department of Microbiology, Duke University Medical Center, Durham, NC 27710. *Duke University is an Equal Opportunity/Affirmative Action Employer.*

MOLECULAR GENETICIST YALE SCHOOL OF MEDICINE

The Department of Human Genetics invites applications for a position as an assistant professor, a tenure-track position with excellent laboratory facilities, in a stimulating environment. We seek candidates who have a Ph.D. or M.D. degree, a record of accomplishment in research, and exceptional potential for establishing an independent program of research. Candidates interested in developmental genetics are encouraged to apply; however, all highly qualified applicants will receive equal consideration. Applicants are invited to submit curriculum vitae, representative publications, a statement of research interests, and to arrange to have three letters of recommendation sent to:

Dr. Charles M. Radding
Chairman, Faculty Search Committee
Department of Human Genetics
Yale University School of Medicine
P.O. Box 3333
New Haven, CT 06510

Applications should be submitted before 31 March 1988. *Yale University is an Equal Opportunity/Affirmative Action Employer.*

MOLECULAR VIROLOGIST. Tenure-track assistant professor position available after 1 July 1988. Candidates should have research interests in virology at the molecular biology level. Responsibilities include contribution to departmental teaching effort and participation in a joint Ph.D. graduate program with the School of Medicine. The applicant will be expected to maintain independent research, and successfully compete for financial support. Applicant should send curriculum vitae and the names and addresses of three referees to: Dr. Teh-hsing Chiu, Department of Pittsburgh, Pittsburgh, PA 15261. Closing date for position is 1 April 1988. *The University of Pittsburgh is an Equal Opportunity/Affirmative Action Employer.*

NEUROPHARMACOLOGY FACULTY POSITION: The Department of Pharmacology at New York Medical College invites applications for an assistant or associate professor, tenure-track position. Applicants should have an M.D. or Ph.D. degree in pharmacology, biochemistry, physiology, cell biology or in a related field, and ability to develop an independent research program that applies modern techniques of biochemistry, molecular and cell biology to the investigation of problems in neurobiology and neuroendocrinology. Forward curriculum vitae, a list of publications, and three references by 30 March 1988 to: John C. McGiff, M.D., Professor and Chairman, Department of Pharmacology, New York Medical College, Valhalla, NY 10595.

Research Scientists

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Explore your future at the forefront of some of today's most significant breakthroughs in pharmaceutical-biotechnical research. We have immediate creative opportunities in the following areas:

■ Molecular Genetics

SENIOR SCIENTIST—To investigate molecular mechanisms of fungal inhibition. Requires PhD with 0-3 years' postdoctoral experience in biochemistry, molecular biology or related field. Expertise in microbial genetics and recombinant DNA technology is essential, as well as demonstrated capabilities for independent research.

■ Pharmacology

SR. SCIENTIST—Requires PhD and 0-4 years' postdoctoral experience in cardiovascular pharmacology with emphasis on cellular aspects of vascular function. Expertise in one or more of the following is desirable: endothelial-smooth muscle interactions, vascular-smooth muscle cell electrophysiology cell culture, or ion transport in vascular tissue.

■ Biotechnology

SR. SCIENTIST—To pursue innovative approaches in heterologous gene expression in *E. Coli* and mammalian cells; elucidation of genetic structure, function and control of various known and novel lymphokines and cytokines; and cloning and characterization of their receptors. Requires PhD and 0-3 years' experience in molecular biology or related field. Facility with *E. Coli* and/or mammalian expression systems, site-specific mutagenesis and other genetic engineering techniques are essential.

■ Lipoprotein Metabolism

SR. SCIENTIST—Must be expert in regulation and measurement of lipoproteins to join our atherosclerosis drug discovery group. Requires PhD and 2-3 years' experience in evaluation of diet and drug actions on apoprotein and lipoprotein metabolism *in vivo*.

ASSISTANT SCIENTISTS—Requires BS/MS degree and experience in lipid and lipoprotein metabolism, and histochemical assessment of atherosclerotic vascular lesions.

To learn more about our challenges and your compensation, send your resume, clearly indicating position of interest, and salary history in confidence to: Mr. Louis DeMartino, Schering Research, 60 Orange Street, Bloomfield, NJ 07003. We are an equal opportunity employer.



Schering-Plough

U.S. PATENT AND TRADEMARK OFFICE

POSITION: Microbiologist/Patent Examiner Opportunity involves the scientific and legal evaluation of patent applications involving recombinant DNA, molecular and cellular immunology, molecular genetics, microorganisms, cell biology, cell culture, fermentation, enzymology or clinical chemistry.

QUALIFICATIONS: A full 4-year or longer professional curriculum in an accredited college or university leading to a Bachelor's Degree or higher with specific study in Molecular Biology, Biochemistry, Immunology, Enzymology, Embryology, Protein Chemistry, Microbiology or Cell Biology.

A Ph.D. or M.S. degree with relevant research experience is preferred. A B.S. degree with significant research experience will be considered.

Research Experience in any of the following areas would be beneficial: DNA cloning, protein chemistry, gene expression, sequencing techniques, muteins, hybridoma technologies, monoclonal antibody applications, mammalian or plant cell lines, cell culture, immunossays, hybridization techniques, fermentation, enzymatic reaction, diagnostics and automation of clinical analysis.

SALARY: Dependent upon experience and qualifications.

LOCATION OF POSITION: Arlington, VA

For further information contact:

Patent and Trademark Office
Office of Personnel, C&E
CPK 1, Suite 700
Washington, D.C. 20231
703-557-3631
Toll free: 800-368-3064

Bioanalytical Scientist

BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc., a major innovator in the research, development and marketing of ethical drugs, currently has an opening at our Research and Development facility, located in **DANBURY, CONNECTICUT.**

The Analytical Chemistry Department is seeking a Ph.D. level Scientist with a strong background in Bioanalytical Science and industrial experience in the release and stability testing of monoclonal antibodies and related biotechnology products. Strong written and oral communication skills as well as proven leadership skills are an asset for this position.

BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc. offers a competitive compensation and benefits package, relocation assistance and the opportunity to have your contributions recognized.

For confidential consideration, please send your curriculum vitae to: **Dept. JC-IBS, BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc., 90 East Ridge, P.O. Box 368, Ridgefield, CT 06877.** We are an equal opportunity employer, m/f/h/v.



**Boehringer
Ingelheim**

RESEARCH TOXICOLOGIST

Alcon Laboratories is a \$500 million multinational pharmaceutical company and the recognized industry leader in ophthalmic research. The growth of our basic research group has created an immediate requirement for a Senior Scientist within our Research Toxicology Section. This position will take a leading role in the design and conduct of studies investigating biochemical and cellular mechanisms of toxicity of drug candidates and therapeutic modalities.

Requirements include:

- Ph.D. in Toxicology or related discipline
- Postdoctoral and research experience in in vitro techniques, xenobiotic metabolism or oxidative mechanisms of tissue injury highly desirable
- Good oral/written communication skills

This position offers an excellent opportunity for professional recognition and career growth. We offer a competitive starting salary, company paid benefits, an excellent profit sharing plan, and a desirable Fort Worth location with numerous recreational, cultural, and economic advantages. If you are seeking a career opportunity involving challenging work within a dynamic, state-of-the-art research environment, please send resume with salary history to: **Sherry H. Rightmer, Employment Supervisor, Alcon Laboratories, Inc., P.O. Box 6600, Ft. Worth, TX 76115.**

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**THE INTERNATIONAL RICE RESEARCH INSTITUTE (IRRI)
SEEKS A DEPUTY DIRECTOR GENERAL
FOR RESEARCH**

RESPONSIBILITIES:

- Provide leadership in multidisciplinary research among scientists in various agricultural disciplines from both developed and developing countries.
- Develop, budget, monitor, and evaluate research conducted within a decentralized management structure
- Establish and maintain collaborative research programs that complement those of national agricultural research systems in rice-growing countries

QUALIFICATIONS:

- PhD in agricultural or biological sciences with excellent scientific record and recognition
- Demonstrated vision and experience in the planning and accomplishment of interdisciplinary research
- Ability to motivate an internationally recruited staff from different cultural, and social, and scientific backgrounds
- Extensive experience in administrative and financial management
- Experience in international collaborative research, both with national agricultural research systems in rice-growing countries and advanced institutes

The deputy director general for research will live at IRRI headquarters on the campus of The University of the Philippines, Los Banos—60 km south of Manila. Substantial international travel will be required. The salary and benefits will be commensurate with salaries and benefits of similar international institutes and programs in agriculture.

IRRI is an international, non-profit, agricultural research institute funded by about 30 donor nations and organizations. IRRI conducts research on the rice plant and on all phases of rice production, management, distribution, and utilization. Its goal is to enhance rice production and sustainability to benefit the more than one billion people in the world who are dependent on rice for their livelihood and as their basic food.

Applications due: 30 March 1988

Submit curriculum vitae and the names of three references to:

Dr. Klaus J. Lampe, Director General-Designate
IRRI
P.O. Box 933
Manila, Philippines

Reply to U.S. Telex no. 4900009251 (4900009251IRRI UI)

**BACTERIAL GENETICS -
MOLECULAR BIOLOGY**

EG&G Idaho, Inc., Prime Operating Contractor for the Department of Energy's Idaho National Engineering Laboratory has a Staff/Postdoctoral position available in its Biotechnology Group. Qualifications should include laboratory experience with most or all of the following: methods of bacterial identification/classification, mutant production and characterization, bacterial mating/strain construction, bacteriophage isolation and manipulation, plasmid and chromosomal DNA isolation and characterization, nucleic acid hybridization, recombinant DNA techniques/cloning, microorganism transformation, DNA sequencing. Experience with environmental microbes would be advantageous but is not essential.

The Biotechnology Group studies the capabilities of a variety of environmental microorganisms and the application of those capabilities to problems in energy, materials, waste management, etc. The Group and its programs are steadily expanding. Their laboratories are located in the INEL Research Center, a newly completed 50,000 sq. ft. facility located in Idaho Falls. This facility also houses research groups in chemistry, physics, environmental sciences, advanced materials, etc. This high technology environment is located within easy reach of several major year-around outdoor recreation areas, including some of the largest remaining wilderness areas in the U.S.

We offer a competitive salary and benefits package. Position and salary will be commensurate with qualifications and experience. Please send your resume, references and salary history to: **Employment Services, (HD-38), EG&G Idaho, Inc., P.O. Box 1625, Idaho Falls, Idaho 83415.** We are an equal opportunity employer M/F/H/V. U.S. Citizenship required.



CLINICAL

DIAGNOSTICS

San Francisco Bay Area

BIO-RAD LABORATORIES is a worldwide leader in the fields of clinical diagnostics, chemical separations and analytical instrumentation. Our Clinical Diagnostics Division is continuing to expand in order to undertake the development of new immunoassay systems for the 1990s. We are looking for motivated, goal-oriented professionals with experience in the following areas:

Business Unit Manager

This leadership position is responsible for the research and development, and marketing activities for major product lines both existing and planned. These responsibilities include the challenge of providing general management direction to a strong team of talented research and marketing professionals. Experience in diagnostics or a related health industry with a technical education is desired along with the ability to plan and implement product/marketing strategies.

Research and Development Manager

You will need 5 or more years' experience in diagnostics with at least 3 years of project management. Excellent people skills and the demonstrated ability to manage multidisciplinary teams are essential.

Marketing, service, and a strong customer orientation are part of the culture and direction we desire for these positions.

We also have a variety of positions available in immunoassay development, microbiology, and instrumentation engineering.

Be part of the team in our new facilities overlooking the Bay in Hercules, California.

For consideration, please submit resume to Bio-Rad Laboratories, Human Resources, Dept. #293-S0212, 1000 Alfred Nobel Drive, Hercules, CA 94547. EOE.

BIO-RAD

Laboratories

POSITIONS OPEN

NEUROBIOLOGY— POSTDOCTORAL ASSOCIATES

Two openings are now available in the laboratory of Dr. Robert O'Connell to study Olfactory Neurobiology. One position seeks to explore olfactory transduction at the membrane level. This research involves biophysical and biochemical approaches to the molecular mechanisms responsible for pheromone detection in insect olfactory receptor neurons. Experience with either membrane reconstitution, second messenger system biochemistry or single-channel recording techniques is required. The second position seeks to explore mechanisms of olfactory communication at several levels. The planned research involves a multidisciplinary approach to the anatomical, behavioral, chemical, electrophysiological, and hormonal substrates of olfactory communication in several mammalian species. Experience in one or more of these areas is required. Salaries are commensurate with experience. The Worcester Foundation is situated on a wooded 100-acre campus only a few minutes from the Medical School and other universities in Worcester and in close proximity to Boston, Hartford, and Providence area academic and research institutions. Send curriculum vitae, a statement of past research interests, and the names of at least three references to: Dr. Robert O'Connell, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.

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

ORGANIC SYNTHETIC CHEMIST

Subsidiary of the Cook Group of Companies, worldwide medical technology manufacturers, seeks an experienced, dynamic Ph.D. to lead an exciting research group, primarily but not exclusively focused on diagnostic drugs such as radiographic contrast media. Competitive salary and benefits. Please forward résumé with statement of availability to: Cook Imaging, 3333 North Torrey Pines Court, #100, La Jolla, CA 92037.

PHYSICAL CHEMIST—Williams College has an opening for a tenure-track position in physical chemistry for fall 1988 (Ph.D. required; postdoctoral experience preferred). Applicants should have a strong commitment to both teaching and research. Teaching assignments will encompass physical chemistry courses and other courses in the chemistry curriculum consistent with the person's background and interests. A semester teaching load normally includes complete responsibility for one course with laboratory and supervision of senior research projects. Williams College is a highly selective, coeducational, liberal arts institution of approximately 165 faculty, 1950 undergraduates, and 25 to 35 chemistry majors each year, located in northwestern Massachusetts. The Chemistry Department is accredited by the ACS, and has excellent facilities for teaching and research. Send résumé, undergraduate and graduate transcripts, description of research interests for undergraduates, and names of three references to: Dr. James F. Skinner, Chairman, Department of Chemistry, Williams College, Williamstown, MA 01267, by 11 March 1988. *Equal Opportunity/Affirmative Action Employer. We are especially interested in identifying minority and women candidates.*

PLANT PHYSIOLOGIST. The Department of Biology at Trinity University invites applications for a tenure-track faculty position at the assistant professor level available August 1988. Candidates must have a Ph.D. in biology with a preference given to persons with a specialty in plant physiology or plant cellular and molecular biology. Duties include the development of a lecture and laboratory course in the area of specialty, participation in core courses for majors, and academic advising. The successful candidate will be expected to establish a vigorous research program in one of the following areas: cellular/molecular biology, developmental genetics, comparative physiology, embryogenesis, or ecological physiology of plants. Salary will be commensurate with education and experience. Trinity University is a private, primarily undergraduate 4-year liberal arts and sciences institution of 2600 students. Applicants should send curriculum vitae, summary of research experience and interests, and names of three references to: Professor Thomas L. Koppenheffer, Chairman, Department of Biology, Trinity University, San Antonio, TX 78284. Application deadline is 7 March 1988. *Trinity University is an Equal Opportunity/Affirmative Action Employer.*

Sr. Scientist/Section Leader Microbiology

SANDOZ CROP PROTECTION CORPORATION, a company widely recognized for excellence in agricultural research and manufacturing, has an opening for a Microbiologist as Sr. Scientist/Section Leader in Biological Development. The function of this position will be to direct fermentation development for Microbial Insecticides. Requirements include:

- * Ph. D. in Microbiology with minor in Biochemistry and/or immunology
- * At least 5 years experience in Microbial physiology research with bacterial cultures and 2 years fermentation process development.
- * Skills in modern biotechnology techniques desired.

For consideration send resume to:

SANDOZ CROP PROTECTION CORP.

Denise Wiley
P.O. Box 220
Wasco, CA 93280



EEO/AA

PHARMACOLOGIST INFLAMMATION IMMUNOLOGY

Ph.D. level with a minimum of 3 years industrial experience in Inflammation/Immunomodulation drug discovery. Knowledge of *in vivo* and *in vitro* models of disease highly desirable. A high energy level and a strong knowledge of the relevant literature is essential. Our team employs the very latest in computer assisted drug design technology, by utilizing the Computer Automated Structure Evaluation (CASE) program. We are looking for a pharmacologist who will work closely with our theoretical and synthetic chemists, using artificial intelligence techniques to identify new chemical entities. If an opportunity for self-direction and scientific leadership is appealing, please apply.

BIOFOR, INC. is located in Northeastern Pennsylvania near the beautiful Pocono Mountains. We offer opportunity for substantial growth. All inquiries will remain confidential.

Send resume to:

BIOFOR, INC.

P.O. Box 577
Waverly, PA 18471

Postdoctoral Associates

CIBA-GEIGY Pharmaceuticals

CIBA-GEIGY, a leader in pharmaceutical research, currently has a unique opportunity available at the Summit, New Jersey, Division headquarters.

Candidates will participate in an innovative, multidisciplinary effort targeted at the rational design of receptor antagonists. A recent PhD in Molecular Biology or a related area and experience with gene expression and mutagenesis are required. An interest in protein structure is preferred.

At CIBA-GEIGY, you'll find a stimulating environment offering competitive salaries, excellent benefits and an ideal opportunity to grow both personally and professionally. Please send your resume, in confidence, to: Ms. Sandra Latzer, Dept. SL, The Pharmaceuticals Division, CIBA-GEIGY Corporation, 556 Morris Avenue, Summit, NJ 07901. We are an equal opportunity employer m/f/h/v.

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SENIOR MICROBIOLOGISTS

Rohm and Haas Company, a Fortune 200 manufacturer of specialty chemicals for industry and agriculture, has several immediate openings for Senior Microbiologists in the Biocides Research Department. These positions are at our Corporate Research Center in Spring House, PA — twenty miles north of center-city Philadelphia. They represent significant growth in our commitment to develop leading biocides to add to our Kathon® product lines.

SENIOR MICROBIOLOGIST: Applications Research

Ph.D. or experienced M.S. microbiologist with extensive experience in:

Water Treatment

- Cooling towers
- Paper making
- Oil production

or

Preservatives

- Metalworking fluids
- Cosmetics
- Consumer products

This scientist will be responsible for research to determine how best to use antimicrobial compounds (biocides) in a variety of industrially important products and processes.

SENIOR MICROBIOLOGIST: Biocides Evaluation

Ph.D. or experienced M.S. microbiologist, with extensive knowledge of screening and evaluating biocidal candidates for commercial applications.

Responsibilities involve integrating our screening operations to facilitate selection of candidate biocides for applications testing and development, and reporting evaluations to management.

SENIOR MICROBIOLOGIST: Microbial Physiology

Ph.D. microbiologist, with emphasis in microbial physiology or microbial ecology. Research projects include:

- Determining the mechanisms of action of selected antimicrobial agents.
- Investigating the ability of microorganisms to develop resistance to selected antimicrobial agents in specific industrial applications.

No previous industrial experience required for this position.

SENIOR MICROBIOLOGIST: Biodeterioration Mycology

Ph.D. or experienced M.S. scientist with experience in fungal biodeterioration. This scientist will work in our applied mycology group on projects to establish how best to use biocides to prevent fungal damage. Applications that the group is currently investigating include:

- Wood degradation
- Plastics
- Paints and coatings
- Textiles
- Distillate fuels

Besides superior technical accomplishments, successful candidates must exhibit excellent written and oral communication. Also important are those organizational and interpersonal skills that ease effective collaboration with scientists of other disciplines. Candidates should be U.S. citizens or permanent residents.

Rohm and Haas offers a highly competitive salary and benefits program, including relocation assistance. Our staff enjoys modern research facilities, a high investment in research, and outstanding analytical support. There are many opportunities for professional development and, whenever possible, we promote from within.

Please send your resume, including three professional references, in confidence, to:

Corporate Staffing #888



An Equal Opportunity Employer M/F.

Visiting Cardiovascular Scientist

A postdoctoral Visiting Scientist position is available within the Medical Products Department at Du Pont's Experimental Station in Wilmington, Delaware. The successful candidate will conduct basic research on the renin-angiotensin system, angiotensin II receptor. Candidates should have a strong background in cardiovascular, renal and/or molecular pharmacology. The appointment will be for one year, renewable for a second year upon mutual agreement.

At the world renowned Du Pont Company, you'll find a highly stimulating multidisciplinary research environment in addition to an excellent salary. To be considered, please send your resume, bibliography, and references to: Dr. Stephen T. Toy, Employee Relations Department, Room X51005, Du Pont Company, Wilmington, Delaware 19898.



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

TENURE TRACK STAFF POSITIONS AT THE BIOLOGICAL RESPONSE MODIFIERS PROGRAM, NCI

The Clinical Research Branch, Biological Response Modifiers Program, Division of Cancer Treatment, the National Cancer Institute, National Institutes of Health, Public Health Service, is accepting applications for two staff positions. Positions are available to physicians who are either Board eligible or Board certified in medical oncology.

The incumbent will be responsible for primary patient care and the design and conduct of clinical trials utilizing biological response modifiers. Emphasis is also placed on continuity of patient care, principles of patient management, and correlation of clinical response with changes in immunologic parameters.

Staff Fellows will be assigned to Civil Service positions with an annual salary between \$24,000 and \$49,266 (based upon experience) and an increase up to \$1,500 for each additional year up to a maximum of \$49,266. Staff Fellows are eligible for all benefits including health insurance, life insurance options, vacation, and sick leave. In addition, travel expenses for the Fellow to his duty station are available.

For further information and application procedures, please contact:

Ronald G. Steis, M.D.
Medical Pavilion,
Frederick Memorial Hospital
335 Park Avenue
Frederick, Maryland 21701
(301) 698-5929

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PERMANENT RESIDENCY REQUIRED

AN NIH ASSOCIATE TRAINING PROGRAM
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Deadline for applications is March 15, 1988.



UNDERGRADUATE RESEARCH

The U.S. Department of Energy offers college juniors and seniors the opportunity to do research at five federal laboratories. Qualified students spend one academic term in energy-related research at the frontier of science with state-of-the-art facilities and equipment.

BENEFITS

- Stipends up to \$175 per week
- Round-trip travel and housing
- Academic credit may be arranged through the home institution
- Research Areas include: computer sciences, engineering, environmental and life sciences, mathematics, and physical sciences

For detailed information and application forms, please write to this address:

Science and Engineering Research Semester
U.S. Department of Energy
Office of Energy Research, Room 3F-061
1000 Independence Avenue, SW
Washington, D.C. 20585

Application Deadline: March 15, 1988

VETERINARY PATHOLOGIST

We're Caring For the World:

Join A leading Subsidiary of

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ETHICON, INC., the world's leader in wound closure development seeks an experienced Toxicologic Pathologist to participate in wound healing research and the safety assessment of wound healing pharmaceuticals and devices.

This position requires a DVM Pathologist with a minimum of 3 years experience in toxicologic pathology associated with drug development. The ideal candidate will have ACVP board certification or training appropriate to sit for the board examination.

Excellent verbal and written communication skills are required. Send resume or CV to: Mr. Walter L. Pino, Employment Manager

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Equal Opportunity Employer M/F





Develop Desktop Medical Diagnostics

Imagine taking the capabilities of a hospital laboratory right to the patient's bedside or into the office of any doctor anywhere. New technology from Molecular Devices will do just that, merging microelectronics and biochemistry to create a powerful portable medical diagnostic system. Explore the following openings:

Development Microbiologist

Develop immunoassays for microbial systems (including STDs), screen appropriate antibodies, and design novel reagent formats.

Development Chemist

Develop diagnostic procedures using expertise of general clinical chemistries, particularly in area of lipid determination.

Both positions require a PhD (or equivalent) with 5 years' demonstrated hands-on experience.

Send your resume to Professional Staffing, Molecular Devices Corporation, 3180 Porter Drive, Palo Alto, CA 94303. An equal opportunity employer.



Industrial Postdoctoral Position: Human Model Systems in Toxicology

The Environmental Health Laboratory of Monsanto Agricultural Company, located in St. Louis, Missouri, is seeking a Postdoctoral Scientist to participate in toxicology research aimed to develop experimental systems to predict human toxicity.

The successful candidate will participate in our ongoing research program on the validation of cultural hepatocytes as an experimental system to study species comparison of chemical toxicity. Hepatocytes cultured from human and other animal species will be studied. The candidate may also participate in the development of other relevant experimental models to predict human toxicity of chemicals.

Candidates are required to have a Ph.D. in Cell Biology, Biochemistry, Toxicology or other related disciplines, and experience in hepatocyte cultures and measurement of xenobiotic metabolism.

This position is renewable on an annual basis with an anticipated duration of 2 years. External publications and participation in the scientific community will be encouraged.

Monsanto provides a generous compensation package relative to your responsibilities and qualifications. Interested candidates, please forward your resume to: **Vernon L. Bozarth; Mail Zone B3NA; MONSANTO COMPANY; 800 N. Lindbergh Blvd.; St. Louis, MO 63167.** An Equal Opportunity Employer M/F/H/V.

Monsanto

Process Development Chemist Process Development Biochemist Medical Products Department

Several B.S. or M.S. Degree level positions in chemistry and biochemistry with 0-5 years of experience are available within the Pharmaceuticals Division of our Medical Products Department.

Process Development Chemist: This position involves developing processes for the preparation of our bulk pharmaceuticals and drug candidates. Responsibilities include both lab syntheses and support of Semiworks campaigns to produce material for the pre-Clinical and Clinical studies. The qualified candidate will have extensive knowledge and interest in organic synthesis, experience in purifying and characterizing organic compounds and the ability to communicate well in a team environment. Experience with Good Manufacturing Practices is a definite plus.

Process Development Biochemist: This position involves developing processes for the preparation of biological materials for pre-Clinical, Clinical and Diagnostic studies. Responsibilities include laboratory and scale-up programs for the production of large quantities of these biotechnology compounds. The qualified candidate will have an excellent command of biochemistry including practical experience with extraction, purification and characterization of proteins and nucleic acids. Excellent oral and written communication skills are required to work on this multidisciplinary team. Experience with FDA regulation, particularly Good Manufacturing Practices, is a definite plus.

You will find a highly stimulating scientific environment in a modern research facility located near Wilmington, Delaware. We offer excellent compensation and benefits, including relocation. Our mid Atlantic location offers an attractive lifestyle with easy access to a wide-range of academic, cultural and recreational activities. Candidates should send their resumes and references, indicating positions of interest, to: Professional Staffing, Employee Relations Department, Room X51038, Du Pont Company, Wilmington, Delaware 19898.



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

POSITIONS OPEN

PHYSIOLOGY POSITION

PHYSIOLOGIST: A tenure-track position at the level of assistant professor is anticipated beginning August 1988. An earned doctorate is required with postdoctoral experience preferred. The successful applicant will be expected to develop a vigorous research program and supervise graduate students. Teaching responsibilities will include upper division courses in human physiology, including neurobiology, and possibly introductory biochemistry. Submit a letter of application, curriculum vitae, and official transcripts, and have three letters of reference sent to: **Physiology Selection Committee, Department of Biological Sciences, Idaho State University, Pocatello, ID 83209.** Deadline 15 March 1988. *Idaho State University is an Equal Opportunity Employer.*

PLANT ECOLOGIST

The Department of Ecology and Evolutionary Biology at the University of Connecticut invites applications for a tenure-track assistant professorship in plant ecology at the Hartford Regional campus to begin in September 1988.

The successful candidate will be expected to develop a vigorous research program, and to teach beginning and advanced undergraduate courses in biology and will have ample opportunities to interact with colleagues at the nearby main campus on a regular basis. We will provide an office at the main campus in addition to facilities at the Hartford campus. Applicants should submit curriculum vitae, a statement of research interests, reprints of published papers, and at least three letters of reference to: **Dr. Kent E. Holsinger, Chairman Plant Ecology Search Committee, Department of Ecology and Evolutionary Biology, U-43, 75 North Eagleville Road, Storrs, CT 06268.** Applications should be received no later than 7 March 1988. Search #8A270. *Affirmative Action/Equal Opportunity Employer.*

The Australian National University. Applications are invited for appointment to the position of **POSTDOCTORAL FELLOW** (National Research Fellow), Research School of Biological Sciences. The Research School of Biological Sciences seeks a Postdoctoral Fellow (National Research Fellow) to work in collaboration with Drs. G. D. Farquhar and M. R. Badger of the Plant Environmental Biology Group and Dr. T. J. Andrews of the Plant Molecular Biology Group. The School is undertaking a major expansion of recombinant DNA research in plant molecular biology, focusing on the molecular analysis of plant performance. A person with a background in plant molecular genetics and/or mutant selection procedures is required to participate in a program investigating the genetic basis of plant water-use efficiency using *Arabidopsis thaliana* as a model system. The appointee will investigate natural and induced genetic variation in water-use efficiency as reflected by differences in carbon isotope discrimination and will be involved in the physiological and genetic characterization of such variance. The position is available for 3 years, and can be filled immediately; ideally it should be filled by mid-year. Applicants should hold, or expect to gain shortly, a Ph.D. in an appropriate field. Contact **Dr. T. J. Andrews (062 494213 before 15 February 1988)** or **Dr. G. D. Farquhar (062 494492 after 15 February 1988).** Closing date: 29 February 1988. Reference: BS.21.1.1 Salary: Postdoctoral Fellow Grade 1 (fixed point); \$A24,535 to \$A28,029 per annum. Applications should be submitted in duplicate to: **The Registrar, The Australian National University, GPO Box 4, Canberra ACT 2601,** quoting reference number and including curriculum vitae, list of publications and names of at least three referees. The University reserves the right not to make an appointment or to appoint by invitation at any time. Further information is available from the Registrar.

The University is an Equal Opportunity Employer.

POSTDOCTORAL POSITION AVAILABLE

Opportunity for postdoctoral research in biomedical NMR. Medical School NMR facility instrumentation includes 500-MHz, 360-MHz and 200-MHz Bruker spectrometers, and 40-cm-bore, 2.0-T and 5.0-T in vivo spectrometers. Applicant should be skilled in modern NMR techniques and instrumentation. Interest in metabolic studies in vivo a plus. Please send curriculum vitae, bibliography, and three letters of reference to: **Dr. John S. Leigh, Professor, Biochemistry and Biophysics, University of Pennsylvania, D501 Richards Building, Philadelphia, PA 19104-6089.**

POSITIONS OPEN

POSTDOCTORAL FELLOW: The Regional Bone Center at Helen Hayes Hospital is seeking a postdoctoral fellow to participate in studies on the mode of action, regulation and ontogeny of the osteoclast (Project Director: **Dr. David Dempster**). The successful candidate will join a group of investigators engaged in basic and clinical studies on osteoporosis as part of a national Specialized Center of Research in Osteoporosis funded through Health Research, Inc. by the NIH (Principal Investigator: **Dr. Robert Lindsay**). Studies will be based on an established in vitro model of isolated osteoclast activity. Preference will be given to candidates with a strong background in cell biology and experience in cell and tissue culture. Formal training in immunology, hematology, or biochemistry would also be advantageous. Starting salary range: \$20,000 to \$25,000, depending on experience, with excellent fringe benefits. The position is available for 5 years in the first instance. Helen Hayes Hospital is a Columbia University-affiliated, New York State Department of Health facility located within easy reach of New York City. Résumés should be submitted to: **Human Resources, Helen Hayes Hospital, Route 9W, West Haverstraw, NY 10993.** *Health Research, Inc. is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOWSHIPS HIPPLE CANCER RESEARCH CENTER

Postdoctoral positions are immediately available for Ph.D. biochemists, molecular biologists, or experimental hematologists who wish to concentrate on one of the following:

- (i) purification and characterization of hematopoietic growth factors relevant to blood cell differentiation and proliferation (**Dr. M. J. Murphy**).
- (ii) interferon receptors and interferon-mediated regulation of cellular gene expression and the underlying biochemical mechanisms (**Dr. S. L. Gupta**).
- (iii) isolation and biochemistry of melanoma growth factors (**Dr. M. D. Bregman**).

Send letter describing research experience/interest, including curriculum vitae and names of three referees to: **Human Resources Consultant, Hipple Cancer Research Center, 4100 South Kettering Boulevard, Dayton, OH 45439-2092.**

POSTDOCTORAL POSITION available immediately to study cyclic AMP phosphodiesterase and G protein in *Phycomyces blakesleeana* including their characterization, mode of action and reconstitution in a heterologous system. Experience in a related area of membrane biochemistry is desirable. Send résumé and names of three references to: **Robert J. Cohen, Ph.D., Department of Biochemistry and Molecular Biology, University of Florida, College of Medicine, Gainesville FL 32610.**

POSTDOCTORAL POSITION available immediately for a recent Ph.D. immunologist or molecular biologist to study at a molecular level cytokine production and disease mechanisms in experimental models of inflammation. Prior experience in cellular immunology and/or molecular techniques is desirable. Send curriculum vitae and three references to: **Roger Kurlander M.D., Box 3486, Duke University Medical Center, Durham, NC 27710.** *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION

Available to study genetic recombination; genetic and molecular approaches to analyze recombination initiation and mismatch repair using prokaryotic systems.

Send curriculum vitae including references to: **Dr. Brooks Low, Radiobiology Laboratories, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.** *Yale University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS available to study: (i) The molecular basis of natural killer cell function and phenotype (**C. Dahl**); (ii) The molecular basis of oncology stimulating factor driven myeloid cell proliferation and differentiation (**D. Tweardy**); and (iii) The molecular cytogenetics of tumor development and progression (**S. Gollin**). Background in molecular biology desired. Additional experience in cellular immunology or mammalian cell culture useful. Send curriculum vitae, summary of research experience, and names of three references to: **Dr. Carol Dahl, Pittsburgh Cancer Institute, 3343 Forbes Avenue, Pittsburgh, PA 15213.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION

A postdoctoral position is available immediately to study microtubule-associated motility factors and other microtubule-associated proteins. Projects involve molecular cloning of microtubule-associated proteins from brain tissue and sea urchin egg; and molecular, biochemical and immunological analysis of proteins involved in fast axoplasmic transport and mitosis. Send curriculum vitae and three letters of recommendation to: **Dr. Richard Vallee, Principal Scientist, Co-Director of the Cancer Center, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.** *An Equal Opportunity/Affirmative Action Employer M/F/H.*

POSTDOCTORAL POSITION in molecular biology available immediately to work on either of two NIH-funded projects: eukaryotic ribosomal RNA processing, or growth-related gene expression in polycystic kidney disease. Applicants should have a recent Ph.D. degree in biochemistry or molecular biology and experience in recombinant DNA, cDNA cloning, DNA sequencing, or expression systems. Send curriculum vitae and names of three references to: **Dr. James P. Calvet, Department of Biochemistry, University of Kansas Medical Center, Kansas City, KS 66103.** *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS

Lipids-Atherosclerosis-Nutrition Training Program funded by NHLBI. Postdoctoral traineeships are available for research and training in areas of (a) lipoprotein structure and metabolism, (b) cholesterol and bile acid homeostatic mechanism, (c) arterial wall and pathogenesis of atherosclerosis (d) parenteral nutrition and lipid metabolism, (e) modulation of lymphocyte physiology and (f) molecular genetics of hyperlipoproteinemia. Faculty includes **M. Ashraf, Ph.D., W. F. Balistreri, M.D., B. N. Campaigne, Ph.D., J. A. K. Harmony, Ph.D., D. Y. Hui, Ph.D., J. E. Heubi, M.D., J. E. Fischer, M.D., R. L. Jackson, Ph.D., J. M. Vander Bel-Kahn, M.D., E. A. Stein, M.D., F. Schroeder, Ph.D., D. L. Sprecher, M.D., F. Suchy, M.D., M. T. R. Subbiah, Ph.D., and R. C. Tsang, M.D.** Candidates with a Ph.D. degree in biomedical fields and those with M.D. degree, with appropriate research experience, are eligible to apply. *Applicants must be U.S. citizens or hold an immigrant visa.*

Send curriculum vitae with three letters of recommendation indicating the special area of research interest to: **Dr. M. T. R. Subbiah, Program Director, University of Cincinnati Medical Center, 234 Goodman Street, K-Pavilion, M.L. #540, Cincinnati, OH 45267.**

POSTDOCTORAL POSITIONS IN MOLECULAR GENETICS. Positions are available for work in either of two areas. Projects involve studies on the structure, evolution and impact of SINEs in the human genome (see: *Annu. Rev. Biochem.* 55, 631-661; and *Trends in Genetics* 2, 76-80) and studies of the expression and mechanism of cell-cycle regulation of the human thymidine kinase gene (see *Gene* 52, 267-277). Facilities, scientific environment and funding for these studies are excellent. Salary and starting date are negotiable. Send curriculum vitae and names, addresses, and phone numbers of three references to: **Dr. Prescott Deininger, Department of Biochemistry and Molecular Biology, Louisiana State University Medical Center (LSUMC), 1901 Perdido Street, New Orleans, LA 70112.** Telephone: 504-568-4735. *LSUMC is an Equal Employment Opportunity/Affirmative Action Employer.*

Function, biochemistry and chemistry of glycoconjugates has become the focus of our research studies. At present **THREE POSTDOCTORAL POSITIONS** are likely to be available. Two to study physico-immunochemistry, expression and function of leukocyte lectin. Experience in protein chemistry/molecular biology preferred. Studies involve protein sequencing, binding site analysis, immunocytochemistry, metabolic and genetic regulation; opportunity for gene cloning and sequencing for the outstanding applicant. One to investigate chemical and enzymatic synthesis of oligosaccharides. Candidates expected to interact with collaborating research groups in cell, molecular, and immunobiology. Anticipated start date 1 April 1988. Reply with curriculum vitae and three references to: **Dr. Howard Allen and Dr. Khushi Matta, Roswell Park Memorial Institute, Buffalo, NY 14263.**

DEPARTMENT OF GENETICS

A vacancy is available for a *Mammalian Population, Cell or Molecular Geneticist* at the Assistant Professor level. Candidates with interests in human systems will be accorded particular consideration. The tenure-track appointee will be expected to teach an advanced course on human genetics, as well as participating in more general offerings at intermediate and/or introductory levels. An appropriately qualified appointee may be eligible for substantial research establishment funding from the Alberta Heritage Foundation for Medical Research.

Candidates for the position should have a Ph.D. and postdoctoral research experience. Establishment of an independent research program will be an integral part of the appointee's duties and excellent research potential is considered imperative. The appointment will commence early in the 1988/89 academic year. Salary will be in the range \$31,612-\$45,340, commensurate with qualifications.

Genetics currently has thirteen faculty, housed in a modern research facility in the Faculty of Science; research emphasis is molecular biological. The University of Alberta, Alberta's senior university, has 25,000 students. Heavy emphasis on biosciences is found in the Faculties of Science, Medicine and Agriculture and Forestry. Wide opportunities for collaborative research are available. Edmonton is a city of 500,000, a supply centre for agriculture and petroleum industries and Alberta's capital.

Optimal starting date is July 1, 1988. Applications will be accepted until the position is filled, but would be appreciated before March 31, 1988. Applicants should send a *curriculum vitae*, reprints of four (or more) recent research publications and the names and addresses of at least three referees to:

Dr. David Nash
Chairman
Department of Genetics
University of Alberta
Edmonton, Alberta T6G 2E9
Canada

The University of Alberta is committed to the principle of equity in employment. In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

PEPTIDE/PROTEIN BIOCHEMISTS

The Marlstone Corporation is seeking biochemists in the following areas of specialization:

Peptide Biochemist

Principal Investigator/Research Scientist
PhD with 2-5 years experience in the pharmaceutical or agrichemical business, specializing in the structure and function of peptides and the design of synthetic peptide analogs. Management and planning skills necessary.

Computational Biochemist

Research Scientist
PhD with postdoctoral experience, specializing in protein structure analysis by computational methods. Experience with molecular dynamics calculations, energy minimization and water models essential.

Located in the San Francisco Bay Area, The Marlstone Corporation has developed proprietary technology for the rational design of peptides and proteins. The positions involve application of that new technology as well as continued development as part of an interdisciplinary team.

Please send resume to:
Ms. Barbara Nova
The Marlstone Corp.
24 Belvedere, Suite H
San Rafael, CA 94901



SUPPORT FOR NEW USERS AT SYNCHROTRON RADIATION AND NEUTRON BEAM RESEARCH FACILITIES

The NSLS/HFBR Faculty/Student Support Program is designed to encourage new users to BNL's National Synchrotron Light Source (NSLS) and High Flux Beam Reactor (HFBR). The program supports faculty/student research groups by covering expenses incurred during exploratory visits to BNL and while performing initial experiments at the NSLS and HFBR. Expenses covered include travel, housing, per diem, and some incidental costs.

Both the NSLS and the HFBR are large interdisciplinary research facilities. The NSLS is a dedicated synchrotron radiation user facility with two electron storage rings—a vacuum ultraviolet (VUV) ring which operates at an electron energy of 750 MeV and provides infrared, ultraviolet, and soft X-ray photons, and an X-ray ring which operates at 2.5 GeV and provides usable photon fluxes at energies from below 1keV to above 20 keV. Instruments for performing photoelectron, photoionization, fluorescence, and infrared spectroscopy, lithography, microscopy, EXAFS (Extended X-ray Absorption Fine Structure), small-angle scattering, diffraction, crystallography, topography, medical imaging, and other studies are available. Scheduling of

experiments is underway on the VUV ring. Scheduling of the X-ray ring is expected to begin during the fall of 1988, following completion of a major upgrade program presently underway.

The HFBR comprises a 60 megawatt research reactor, systems for irradiation experiments, and nine beam tubes which supply neutron fluxes to 15 experimental stations. A cold neutron source is available for inelastic and small-angle neutron scattering experiments. Monochromatic neutron beams in both the thermal and epithermal energy ranges are provided. Instruments are available for a wide range of scientific studies including neutron diffraction, inelastic scattering, chemical and biological structure studies, and a number of areas in nuclear physics.

This program is funded by the U.S. Department of Energy, and is open to U.S. citizens or permanent resident aliens from U.S. institutions of higher education.

To receive an application form or for further information, contact: Susan White-DePace, User Administrator, NSLS Department, Building 725B, Brookhaven National Laboratory, Associated Universities, Inc., Upton, L.I., New York 11973. Equal Opportunity Employer m/f.

BNL BROOKHAVEN
NATIONAL LABORATORY
ASSOCIATED UNIVERSITIES INC.

POSITIONS OPEN

POSTDOCTORAL POSITION in area of electrophysiology (patch clamping) as applied to immunopharmacology in a multidisciplinary setting. Salary competitive. Send curriculum vitae, state research interests, provide address and telephone number of three references to: **Dr. Robert M. Donahoe, Laboratory of Psychoimmunology, Department of Psychiatry, Emory University School of Medicine, Georgia Mental Health Institute, 1256 Briarcliff Road, Atlanta, GA 30306. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION: Available spring 1988 to study the role of DNA methylation in *Escherichia coli*. Topics include: the specificity of base mismatch repair (e.g., *Nucleic Acids Res.* 15, 8205); the regulation of gene expression (e.g., *Annu. Rev. Genet.* 21, 113) and the regulation of *dam* gene expression. Background in microbiology/molecular biology/genetics an advantage. Send curriculum vitae and names of three references to: **Dr. M. G. Marinus, Department of Pharmacology, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA 01655. UMMC is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS are available in two research areas: (i) the molecular biology of gene regulation, high frequency transposition and developmental timing in *Dictyostelium*, and (ii) the regulation of cell motility and chemotaxis at the behavioral and molecular level in *Dictyostelium discoideum*. Send curriculum vitae and names of two references to: **Dr. David R. Soll, Department of Biology, University of Iowa, Iowa City, IA 52242. The University of Iowa is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS SYSTEMS ECOLOGY RESEARCH GROUP

ARCTIC TERRESTRIAL ECOLOGIST—Participate in research project examining ecosystem response to disturbance near Toolik Lake, Alaska. Responsibilities include coordinating field research in tussock tundra on community composition, canopy structures, carbon balance, and production. Experience in arctic ecosystems and computer modeling desirable.

ECOSYSTEM MODELERS (three)—Two positions to participate in Toolik Lake ecosystem modeling project; expertise open but preference given to individuals with experience in arctic ecosystems. One position to participate in joint project with **Dr. F. Bazzaz** (Harvard University) in modeling of plant competition in response to elevated carbon dioxide.

All positions available immediately. Send curriculum vitae and names of three references to: **Systems Ecology Research Group, San Diego State University, San Diego, CA 92182, Attention: Dr. John D. Tenhunen. Telephone: 619-229-2862 for terrestrial ecologist; and attention: Dr. James F. Reynolds. Telephone: 619-229-2887 for modeling positions. An Equal Opportunity/Affirmative Action Employer, Title IX.**

POSTDOCTORAL POSITIONS are available at the National Heart, Lung, and Blood Institute, National Institutes of Health, Public Health Service to study the biochemistry and cell biology of the cytoskeleton and motility systems of non-muscle cells. Current activities include the regulation of actin polymerization by actin-binding proteins, and the structure, enzymatic activity and cellular function of actin-associated and microtubule-associated translocators. These positions have a salary range of \$20,000 to \$37,997 per annum. Salary will be commensurate with experience. These positions are located on the National Institutes of Health (NIH) campus in Bethesda, Maryland. Please send curriculum vitae and three letters of recommendation to: **Dr. Edward D. Korn, Chief, Laboratory of Cell Biology, National Heart, Lung, and Blood Institute, 9000 Rockville Pike, Building 3, Room B1-22, Bethesda, MD 20892. An Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE

Position available to study electrophysiology including intracellular recording, single fiber recording and biochemical pharmacology of gastrointestinal smooth muscle and nerves. Ph.D. degree with prior research experience desirable. Excellent research facilities. Send curriculum vitae and names of three references to: **Raj K. Goyal, M.D., Gastroenterology Division, Department of Medicine, Beth Israel Hospital, Boston, MA 02215. Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

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

POSTDOCTORAL RESEARCH ASSOCIATE POSITIONS—Positions are available at the Northern Regional Research Center, Peoria, Illinois, in four areas of research: (i) glycoprotein biosynthesis and secretion in maize endosperm including enzymology of synthesis, structural studies of oligosaccharides, and targeting of proteins; (ii) regulation of lipid metabolism in soybeans including the measurements of enzyme activities during temperature acclimation and isolation and characterization of the enzymes; (iii) genetic regulation of oligosaccharide biosynthesis in soybeans including enzymology, protein structure and cloning of key metabolic enzymes; (iv) characterization of amylases, glucosidases and dextrinases found in germinating corn including identification of enzymes capable of invasion and hydrolysis of intact starch granules. Knowledge and experience in enzyme assays, protein isolation or purification required. Appointments will be at GS-11 (\$27,716) for 1 year and can be extended. Please send curriculum vitae and names of three references to: **Helen Sweeny, Personnel Department, USDA-ARS-Northern Regional Research Center, 1815 North University Street, Peoria, IL 61604.** Applications in response to this announcement must be marked 8N005. Additional information may be obtained by calling: (i) J. A. Miernyk, (ii) Tom M. Cheesbrough, (iii) Tsung M. Kuo, (iv) Clarence A. Knutson at 309-685-4011. *ARS is an Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE—Ph.D. in immunology/medical microbiology with a minimum of 2 years of experience in handling mice, rabbits, viruses; tissue culture; isolation and culture of lymphoid cells; production purification, and analysis of monoclonal antibodies and lymphokines; HPLC and column chromatography. Must be proficient in the design of experimental protocols, and in writing of reports and papers. The supervision of one to three technicians, graduate students, and other research associates in related research projects is required. Also, the supervision and upkeep of equipment for a group of eight to twelve investigators is required. Full-time 40 hours per week, 9 a.m. to 5 p.m., Monday to Friday. Salary is \$22,500 per year. Send résumé to: **Case #8217 Division of Employment Security, Charles F. Hurley, Employment Security Building, Government Center, Boston, MA 02114.**

BOSTON UNIVERSITY CENTER FOR MOLECULAR BIOPHYSICS POSTDOCTORAL RESEARCH FELLOWS

Several positions are available for postdoctoral researchers to participate in studies of macromolecular assemblies using x-ray and neutron diffraction and electron microscopy. The focus of these studies is the development of new methods for the study of macromolecular structure. Biological systems being studied include filamentous bacteriophages, membrane gap junctions and amyloid fibers. Background in x-ray crystallography, electron microscopy, image analysis or membrane biochemistry preferred. Please send curriculum vitae and the names of three references to: **Dr. Lee Makowski, Center for Molecular Biophysics, Department of Physics, Boston University, 590 Commonwealth Avenue, Boston, MA 02215.**

Boston University is an Equal Opportunity Employer.

POSTDOCTORAL RESEARCH SCIENTIST—Columbia University, the New York Orthopaedic Hospital Research Laboratory. A 3-year postdoctoral position is available within the biochemistry section of an active multidisciplinary research team in a newly equipped laboratory. Areas of interest include the composition, turnover and degradation of articular cartilage and intervertebral disc. Candidates should be knowledgeable in protein/carbohydrate biochemistry, immunochemistry, tissue culture and/or molecular biology. Competitive salary range of \$26,000 to \$32,000 per annum. Interested candidates should send their curriculum vitae to: **A. Ratcliffe, Ph.D., Orthopaedic Research Laboratory, Columbia-Presbyterian Medical Center, 630 West 168th Street, New York, NY 10032. Columbia University is an Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL/RESEARCH ASSOCIATE—position available immediately to conduct research in the area of genetic recombination and microbial differentiation, analyzing cloned genes required for genetic transformation in *Streptococcus pneumoniae*. Candidate must have Ph.D. and a background in microbial genetics or molecular biology. Salary commensurate with experience. Send application letter, curriculum vitae, and names of three references to: **Dr. Donald A. Morrison, Professor, Laboratory for Cell, Molecular, and Developmental Biology, University of Illinois at Chicago, (m/c 067), P.O. Box 4348, Chicago, IL 60680. Telephone: 312-996-6839. An Equal Opportunity/Affirmative Action Employer.**

PROFESSORSHIP IN BIOLOGICAL NMR AND MACROMOLECULAR STRUCTURE at Harvard Medical School. The Department of Biological Chemistry and Molecular Pharmacology is engaged in building a program in structural biology and invites applications for a professorship in biological NMR. Applicants should have an outstanding record of achievement in NMR in structural proteins and/or mechanistic studies of proteins, glycoproteins, or nucleic acids. We seek individuals with strong interdisciplinary interests to interact with current biochemistry and pharmacology faculty.

Interested candidates should send curriculum vitae to: **Professor Christopher Walsh, Department of Biological Chemistry and Molecular Pharmacology, Harvard Medical School, 25 Shattuck Street, Boston, MA 02115. Harvard Medical School is an Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE: Will perform research and analysis of the physical properties of biological macromolecules using NMR techniques. Will study the structure and dynamics of peptides and DNA and their interaction using NMR spectrometer and HPLC. Will perform molecular modeling using computers and develop appropriate techniques for studies of structures and dynamics of DNA and peptides by modifying NMR techniques through development of computer software, new pulse sequence techniques, and hardware development. Requires Ph.D. degree in chemistry. Education to include 2 years of research on peptide structures and DNA dynamics using NMR spectroscopy, including maintenance and software development as well as computer molecular modeling. Hours: 8:30 a.m. to 5:00 p.m. Forty hours per week at \$20,700.00 per year salary. This job is a university position. Please send résumé to: **Illinois Department of Employment Security, 401 South State Street—3 South, Chicago, IL 60605. Attention: Marie Ninneman, Reference #7594-N, An Employer paid ad.**

RESEARCH ASSOCIATE

Conduct cardiovascular research directed toward the study of ionic and/or non-ionic drugs such as renografin, iopamidol, iohexol, ioversol, and angiovist and their effect on the cardiovascular system. Applying knowledge of surgical techniques and working with test animals, candidate will inject dogs with aforementioned drugs through cardiac catheterization to study effects on cardiovascular system and their relationship to hemodynamic changes (cardiac functions), cardiac rhythm disturbances (ECG evaluations), ventricular functions, aortic blood pressure and related activity to prevent serious arrhythmia and sudden heart death during coronary angiography. Study, evaluation and analyses of angiograms. This is a university position. Candidate must have medical degree or Ph.D., and 4 years of direct experience. Salary offered \$22,010.00 per year, 40 hours per week, 8:30 a.m. to 4:30 p.m., Monday to Friday. Send résumé to: **Illinois Department of Employment Security, 401 South State Street—3 South, Chicago, IL 60605. Attention Robert S. Felton, Ref. #V-IL 7448-F. An employer paid ad.**

RESEARCH ASSOCIATE

Research associate with Ph.D. in pesticide chemistry to carry out studies on the pharmacokinetics and metabolism of organophosphorus compounds and the naturally occurring male contraceptive gossypol using GLC, HPLC, and TLC, as well as scintillation counting. Forty hours per week. Salary: \$20,000. If not a U.S. citizen, please indicate visa status. Apply: **Employment Security Commission, 516 North Mangum Street, Durham, NC 27701 or your local job service office. Job order number NC 7101097. DOT codes 090.227-010. Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

RESEARCH ASSOCIATE position available for qualified candidate to work in a multidisciplinary unit within a Center of Cell and Molecular Biology in the area of immunology with an experience in monoclonal antibodies, ELISA and related assay methods. For further information call: 312-702-1775 or write: Dr. A. M. Scanu, Lipoprotein Study Unit, 5841 South Maryland Avenue, Box 231, Chicago, IL 60637. *The University of Chicago is an Equal Opportunity Employer.*

RESEARCH ASSOCIATE—BIOCHEMISTRY

A research associate position is available in x-ray and neutron diffraction studies of cyclodextrins. Analysis of hydrogen bonding networks will be emphasized. Extension of these studies into proteins and nucleic acids is anticipated. Experience in crystallography/biochemistry desirable. Send résumé to:

Dr. Brian E. Hingerty
Oak Ridge National Laboratory
Health and Safety Research Division
Building 9207, MS 002
Oak Ridge, TN 37831

An Equal Opportunity/Affirmative Action Employer

RESEARCH FACULTY POSITION

The Department of Obstetrics and Gynecology, University of Florida College of Medicine, under the direction of **Byron J. Masterson, M.D.**, Professor and Chairman, is seeking applicants for a tenure-track faculty position (Ph.D.) starting August 1988 for candidates demonstrating exceptional research abilities with a strong background and experience in ultrastructural studies, wound healing, implantation, electron microscopy, and molecular chemistry. The individual should be prepared to establish an independent research program and assume teaching responsibilities. Postdoctoral experience in a related field is required. Salary and rank dependent upon qualifications. For full consideration, applicants should submit curriculum vitae and a brief statement of research interest by 1 March 1988 to: **William C. Buhil, Ph.D.**, Department of Obstetrics and Gynecology, University of Florida College of Medicine, Gainesville, FL 32610.

An Equal Employment Opportunity/Affirmative Action Employer

SCIENTIST

The Universities Space Research Association (USRA) has a need for a scientist to prepare, coordinate, organize, document, and distribute Science Requirements related to various microgravity science experiments involving USRA, NASA and university scientists. Work shall include coordination of multiuser needs, scientific evaluation of requirements as regards implementation, enhancing communication among project scientists and between scientists and implementation personnel. Candidates should hold a minimum of a master's degree in physics, materials science, materials engineering, mechanical engineering, or a related field and appreciate both physical and biomedical phenomena related to microgravity science. Candidates with a Ph.D. are encouraged to apply. Good verbal and written skills as well as a willingness to travel are also needed. Additionally, the candidate must have a good knowledge of the relationships between various NASA centers (especially Marshall Space Flight Center), USRA, and NASA-sponsored university scientists as regards the evolution of microgravity science experiments from theoretical hypothesis through to successful flight hardware. Work will be conducted at the Marshall Space Flight Center. Salary commensurate with experience (minimum \$35,000 per year) with full medical and retirement benefits. Send résumé to: **USRA, Dr. James M. Van Alstine, 139-A McMurtrie Drive, Huntsville, AL 35806.** *USRA is an Equal Opportunity/Affirmative Action Employer.*

INSTITUTE FOR MOLECULAR BIOLOGY (IMB), TAIPEI

SCIENTISTS with Ph.D.s are invited to apply for positions in plant molecular biology, protein engineering and macromolecular x-ray crystallography. Send résumé, description of research plan, and two letters of recommendation before 15 March 1988 to: **Dr. Ray Wu, Section of Biochemistry and Molecular Biology, Cornell University, Ithaca, NY 14853.**

Research Scientists

A Responsive Research Environment

Where you can enhance your talents pioneering developments in Chemical R&D

Schering-Plough Corporation, leaders in the research, development, manufacture and marketing of pharmaceuticals and health care products, is seeking exceptionally gifted R&D professionals for the following positions at our Kenilworth, NJ facility:

PH87-37 Section Leader

Requires PhD in Analytical Chemistry or Biochemistry with minimum 5 years' experience in pharmaceutical analysis, including drug substance/dosage forms method development and stability testing. Project management and excellent verbal/written communication skills essential.

PH87-38 Principal Scientist

Requires PhD in Pharmaceutical Science/Biochemistry and knowledge of protein and preformulation chemistry. Minimum of 3 years' experience in formulation development and drug delivery systems, ideally with sterile/parenteral products.

PH87-36 Principal Scientist

Requires PhD in Analytical Chemistry with 3-5 years' post-doctoral work in the pharmaceutical industry, including HPLC immunoassays.

PH87-27 Principal Scientists (2)

Requires PhD in Analytical Chemistry with 3 years' experience in assay development and validation for polymer/protein substances and/or sustained release formulations. Laboratory work should include knowledge of HPLC, gel permeation, chromatography and general protein chemical techniques.

PH87-40 Senior Scientist—Process Improvement

Requires BS/MS in Chemical Engineering or equivalent with at least 5 years' experience in process development with a food or pharmaceutical manufacturer. Must have strong background in process scale-up, troubleshooting optimization, process control and automation. Computer knowledge essential.

PH87-53 Associate Scientist

Requires MS or equivalent in Biochemistry or Chemistry and significant biological experience. Background in protein chemistry, including HPLC and electrophoresis, is essential.

PH87-48 Assistant Scientists (4)

Requires BS in Chemistry or Biochemistry and 0-2 years' laboratory experience. Familiarity with organic/aqueous extractions and protein techniques is desirable.

PH87-41 Assistant Scientist

Requires BS in Chemistry or Biochemistry. 0-2 years' experience in method analysis microscopy, thermal analysis, atomic absorption and x-ray powder diffraction or equivalent desired.

We offer competitive salaries commensurate with education and experience, plus a comprehensive benefit program that includes medical/dental, 100% tuition assistance and profit sharing. Qualified applicants should submit resume and salary history INDICATING REFERENCE NUMBER OF POSITION SOUGHT to: **I. Brennenman, Schering-Plough Corporation, 2000 Galloping Hill Road, Kenilworth, NJ 07033 Mail Stop K-6-1 (E-17).** We are an equal opportunity employer.



Schering-Plough

POSITIONS OPEN

SENIOR RESEARCH SCIENTIST

PDS Research Laboratories is seeking a person with a Ph.D. degree and experience in virology, molecular biology, and/or protein chemistry. Applicants must have 1 to 3 years of postdoctoral training with published work in his or her research area. This position requires a good understanding of human retrovirology and offers high visibility and interaction with members of prominent scientific institutions including National Institutes of Health, U.S. Department of the Army and Food and Drug Administration through collaborations, publications and presentations. Salary commensurate with experience, and comprehensive benefits.

Applicants are invited to send a complete curriculum vitae to:

PDS Research Laboratories
Attention: Dana Lee
13 Taft Court
Rockville, MD 20850
Telephone: 301-294-2297

STAFF SCIENTIST

Medtronic Inc., the international leader in implantable pacemakers, is seeking an individual with graduate or postgraduate work in bioengineering or physiology, and several years of experience in cardiovascular research. This person will conduct studies and work with clinical consultants in evaluating the feasibility of novel pacing and other cardiovascular diagnostic and therapeutic concepts. Experience in acute and chronic animal studies and use of appropriate instruments is essential. A Ph.D. in this field is preferred. Submit résumé/curriculum vitae to: Vern Brewers, Medtronic Inc., 7000 Central Avenue NE, Minneapolis, MN 55432. *Equal Opportunity Employer.*

VISION SCIENCE. Tenured or tenure-track position, rank and salary commensurate with qualifications. Vigorous research program in visual psychophysics, willingness to participate in teaching vision science to optometry students. Send letter of application, curriculum vitae, names of three references to: Dr. Jerry L. Christensen, School of Optometry, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, MO 63121. Application deadline: 24 March 1988. *An Equal Opportunity Institution.*

ZOOLOGIST/ECOLOGIST, tenure-track, starting fall, 1988. Ph.D. and strong interest in undergraduate teaching (including general biology) required. ABDs considered. Send résumé, and three letters of recommendation to: Director of Personnel Services, Southwest State University, Marshall, MN 56258. Screening will begin 1 March 1988.

Southwest State University is an Equal Opportunity Educator and Employer.

COURSE

MARICULTURE: CULTURE OF MARINE INVERTEBRATES FOR RESEARCH PURPOSES. Designed to teach the basics of mariculture to advanced students, this course is scheduled for 22-28 May 1988. Tuition: \$850 (includes room and board). Application deadline is 1 April 1988. For further information, contact: The Office of Sponsored Programs, Marine Biological Laboratory, Woods Hole, MA 02543. Telephone: 617-548-3705, extension 216.

INTERNSHIP

ILLINOIS LEGISLATIVE SCIENCE INTERN. Sangamon State University invites applications from graduates of science or engineering programs (baccalaureate, master's, doctorate) for two 10½-month science internships beginning 1 October 1988 as part of the Illinois Legislative Staff Internship Program. The science interns will be assigned to the Springfield and Chicago offices of the Illinois Legislative Research Unit which provide legislators with information and research about policy issues. The science interns will participate in an academic seminar with other legislative interns. Send curriculum vitae by 15 March 1988 to: Dr. Kent Redfield, Coordinator, Illinois Legislative Staff Internship Program, Sangamon State University, Springfield, IL 62794-9243.

TRAINING PROGRAM

NEUROSCIENCE TRAINING PROGRAM EMORY UNIVERSITY

Applications are invited for graduate fellowships in neuronal cell biology and biophysics, neural systems and psychobiology. The program combines intensive interdepartmental training in neuroscience with the opportunity to specialize in one of the traditional disciplines. Interested candidates with a strong background in biological and physical science may obtain further information from: Director, Neuroscience Program, Department of Anatomy and Cell Biology, Emory University, Atlanta, GA 30322. Telephone: 404-727-4315.

FELLOWSHIPS

FELLOWSHIP IN CELL-MICROCIRCULATORY PHYSIOLOGY. A position is available 1 July 1988 for the study of cell-cell communication in microvessels. Applicants should have an advanced degree in physiology, pharmacology, or cell biology. Training in electron microscopy, electrophysiology, or cell-cell communication is desirable. Applicants should send letters of recommendation and résumés to: Dr. Brian R. Duling, Department of Physiology, School of Medicine, Box 449, Charlottesville, VA 22908. *We are an Equal Opportunity Employer.*

INTERNATIONAL CANCER RESEARCH FELLOWSHIP

The Hayashibara Mutual Aid Fund, a non-profit-making organization within the Hayashibara Group announces a fellowship program. Two awards will be made annually. Fellowship will be taken up at the newly opened Fujisaki Cell Center which is devoted to basic and applied research related to problems in human cancer. The fellowship is normally made for 1 year and is renewable for up to 5 years. The fellowship will be expected to commence within 6 months of the announcement of the awards. The awards are for high quality research work in one of the three categories described below.

- 1) Fundamental Leukemia-Lymphoma Research,
- 2) Cytokine-Lymphokine Research,
- 3) Hematopoietic Cell Cultures.

Qualified person who has a Ph.D., an M.D. or equivalent qualifications will be awarded on merit to suitably qualified research proposal and experiences. Additional information and application forms will be obtained from Jun Minowada, M.D., Director, Fujisaki Cell Center, 675-1, Fujisaki, Okayama 702, Japan.

MARINE BIOLOGICAL LABORATORY MARINE ECOLOGY FELLOWSHIPS

Outstanding applicants to the 1988 summer Marine Ecology Course (see *Science* 8 January 1988 issue) by 1 March 1988, are eligible for two, full fellowships (tuition, plus room and board). Information available from: Marine Biological Laboratory, Woods Hole, MA 02543. Telephone: 617-548-3705, extension 216.

THE ARNOLD ARBORETUM OF HARVARD UNIVERSITY THE KATHARINE H. PUTNAM FELLOWSHIPS IN TREE SCIENCE

Applications are invited from established scholars seeking sabbatical opportunities or from young scientists, who wish to pursue research which would substantially benefit from access to the living woody plant collections of the Arnold Arboretum, and their supporting herbaria and libraries. Fellowships are tenable for up to 1 year. Fields of research can include theoretical and applied botany, horticulture, forestry, landscape architecture and relevant social sciences. Appointees must be willing to teach a course in the University. The fellowship will provide a salary plus fringe benefits according to Harvard University norms. Travel costs to Boston will be reimbursed.

Applications for 1988 to 1989 should be forwarded to: Peter S. Ashton, The Arnold Arboretum of Harvard University, 22 Divinity Avenue, Cambridge, MA 02138, by 29 February 1988.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP MEDICAL UNIVERSITY OF SOUTH CAROLINA

One-year intensive training program in alcohol research. Funded faculty research programs include alcohol teratology, behavioral pharmacology, neurochemistry, and membrane biophysics. Fellowship available beginning 1 July 1988. Applicants must be U.S. citizens with Ph.D. or M.D. Send curriculum vitae and three references to: Dr. Carrie Randall, Alcohol Fellowship Director, Research Service, 109 Bee Street, Charleston, SC 29403. Application deadline is 15 March 1988. *Equal Opportunity Employer.*

POSTDOCTORAL FELLOWSHIP: In biological chemistry and molecular biology, to study the purification, antiserum production, and molecular cloning from a cDNA library of transforming growth factors induced by x-irradiation of plateau-phase mammalian bone marrow stromal cell lines. Ph.D. in molecular biology or biochemistry. Please send curriculum vitae and three letters of recommendation to: Joel S. Greenberger, M.D., Department of Radiation Oncology, University of Massachusetts Medical Center, 55 Lake Avenue North, Worcester, MA 01655. *UMMC is an Equal Opportunity/Affirmative Action Employer.*

The California Institute of Technology, Division of Engineering and Applied Science, invites applications for **POSTDOCTORAL FELLOWSHIPS**, including:

THE DR. CHAIM WEIZMANN POSTDOCTORAL FELLOWSHIP FOR SCIENTIFIC AND ENGINEERING RESEARCH (Restricted to U.S. citizens) THE MYRON A. BANTRELL POSTDOCTORAL FELLOWSHIP FOR SCIENTIFIC AND ENGINEERING RESEARCH (Restricted to U.S. and Israeli citizens)

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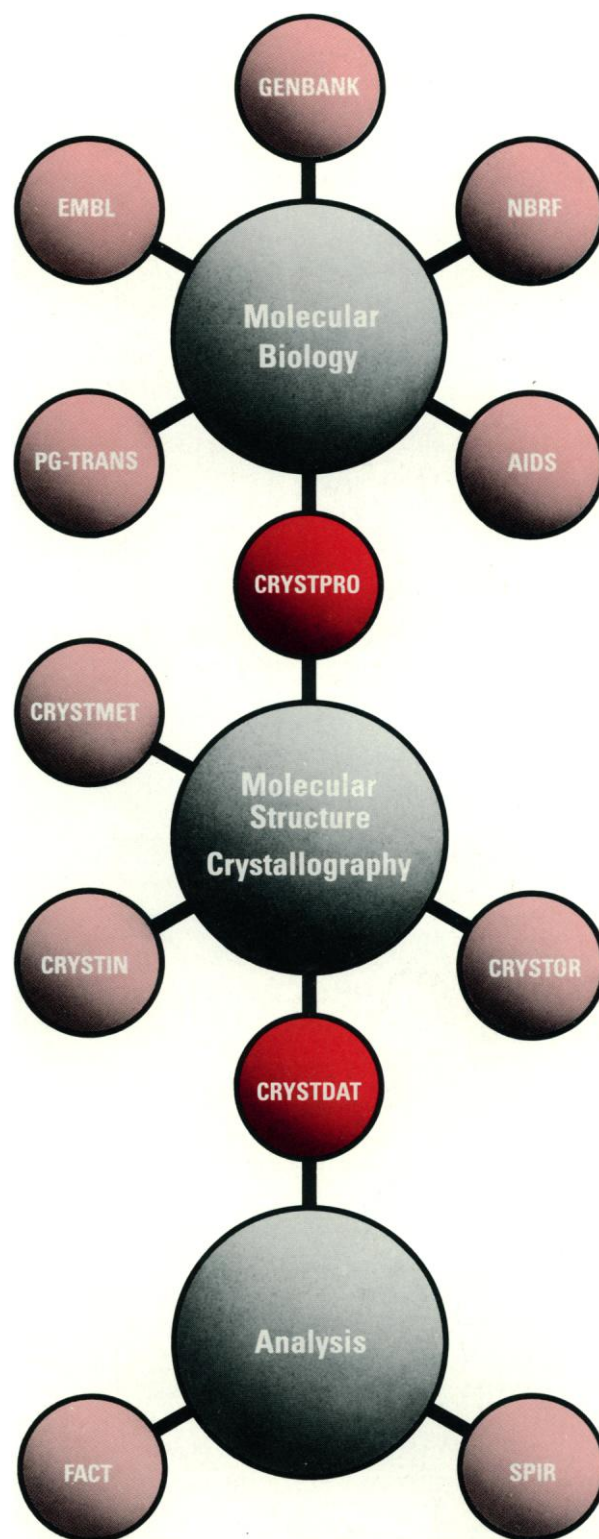
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