

## Books Received

**Appropriating the Weather.** Vilhelm Bjerknes and the Construction of a Modern Meteorology. Robert Marc Friedman. Cornell University Press, Ithaca, NY, 1989. xxii, 251 pp., illus. \$34.95.

**The Arctic Grail.** The Quest for the North West Passage and the North Pole, 1818-1909. Pierre Berton. Viking, New York, 1988. 672 pp., illus. \$29.95.

**Arguments on Evolution.** A Paleontologist's Perspective. Antoni Hoffman. Oxford University Press, New York, 1989. xiv, 274 pp. \$24.95.

**The Art of Measurement.** Metrology in Fundamental and Applied Physics. Bernhard Kramer, Ed. VCH, New York, 1989. xiv, 335 pp., illus. \$66. Research—Measurement—Approval. From a symposium, Berlin, F.R.G., 1987.

**Artificial and Reconstituted Membrane Systems.** J. R. Harris and A.-H. Etemadi, Eds. Plenum, New York, 1989. xviii, 501 pp., illus. \$89.50. Subcellular Biochemistry, vol. 14.

**Artificial Life.** Christopher G. Langton, Ed. Addison-Wesley, Redwood City, CA, 1989. xxiii, 655 pp., illus. \$43.25; paper, \$21.50. Santa Fe Institute Studies in the Sciences of Complexity, vol. 6. From a workshop, Los Alamos, NM, Sept. 1987. History of American Thought and Culture.

**Assisting the Homeless.** State and Local Responses in an Era of Limited Resources. U.S. Advisory Commission on Intergovernmental Relations, Washington, DC, 1988. viii, 152 pp. From a conference, Washington, DC, March 1988.

**Beyond the Crystalline State.** An Emerging Perspective. G. Venkataraman, D. Sahoo, and V. Balakrishnan. Springer-Verlag, New York, 1989. x, 207 pp., illus. \$69. Springer Series in Solid-State Sciences, vol. 84.

**The Chemistry of  $\alpha$ -haloketones,  $\alpha$ -haloaldehydes and  $\alpha$ -haloimines.** Norbert De Kimpe and Roland Verhé. Saul Patai and Zvi Rappaport, Eds. Wiley, New York, 1988. x, 496 pp., illus. \$196. The Chemistry of Functional Groups.

**Chitin Sourcebook.** A Guide to the Research Literature. E. R. Pariser and Donald P. Lombardi. Wiley-Interscience, New York, 1989. Various pages, \$150.

**Chromosomal Variation in Man.** A Catalog of Chromosomal Variants and Anomalies. 5th ed. Digamber S. Borgaonkar. Liss, New York, 1989. I, 803 pp., illus. \$96.

**Clinical Chemistry.** An Overview. N. C. den Boer *et al.*, Eds. Plenum, New York, 1989. xiv, 859 pp., illus. \$135. From a congress, The Hague, June-July 1987.

**Coastal Lowlands.** W. J. M. van der Linden *et al.*, Eds. Kluwer, Norwell, MA, 1988. viii, 370 pp., illus. \$127. From a symposium, The Hague, Netherlands, May 1987.

**Cocaine.** An Annotated Bibliography. Carlton E. Turner *et al.* University of Mississippi Research Institute of Pharmaceutical Sciences and University Press of Mississippi, Jackson, 1988. 2 vols. xxxii, 1364 pp. \$125.

**A Cognitive Theory of Consciousness.** Bernard J. Baars. Cambridge University Press, New York, 1989. xxiv, 424 pp., illus. \$44.50.

**Diet and Obesity.** George A. Bray *et al.*, Eds. Japan Scientific Societies Press, Tokyo, and Karger, Basel, 1988. xiv, 248 pp., illus. \$106.75. Based on a symposium, Kyoto, Japan, Oct. 1987.

**Dynamics of Multibody Systems.** Ahmed A. Shabana. Wiley-Interscience, New York, 1989. x, 470 pp., illus. \$54.95.

**Echinoderm Phylogeny and Evolutionary Biology.** C. R. C. Paul and A. B. Smith, Eds. Published for the Liverpool Geological Society of Clarendon (Oxford University Press), New York, 1988. x, 373 pp., illus. \$115. Current Geological Concepts. Based on a symposium, London, U.K., Dec. 1986.

**Growth and Reproductive Strategies of Freshwater Phytoplankton.** Craig D. Sandgren, Ed. Cambridge University Press, New York, 1989. vi, 442 pp., illus. \$52.50. Based on a symposium, Copenhagen, Denmark, Aug. 1985.

**Hair Analysis.** Applications in the Biomedical and Environmental Sciences. S. A. Katz and A. Chatt. VCH, New York, 1989. x, 134 pp. \$35.

**Hamiltonian Systems.** Chaos and Quantization. Alfredo M. Ozorio de Almeida. Cambridge University Press, New York, 1989. x, 238 pp., illus. \$64.50. Cambridge Monographs on Mathematical Physics. Translated from the Portuguese.

**An Introduction to Hankel Operators.** Jonathan R. Partington. Cambridge University Press, New York, 1989. viii, 103 pp. Paper, \$12.95. London Mathematical Society Student Texts, vol. 13.

**The Moon Observer's Handbook.** Fred W. Price. Cambridge University Press, New York, 1989. xiv, 309 pp., illus. \$34.50.

**Nannofossils and Their Applications.** Jason A. Crux and Shirley E. van Heck, Eds. Published for the British Micropalaeontological Society by Horwood, Chichester, U.K., and Halsted (Wiley), New York, 1989. xiv, 356 pp., illus. \$125. British Micropalaeontological Series. From a conference, London, Aug. 1987.

**Peacemaking Among Primates.** Frans de Waal. Harvard University Press, Cambridge, MA, 1989. xiv, 294 pp., illus. \$29.95.

**Personality Theories.** A Comparative Analysis. Salvatore R. Maddi. 5th ed. Brooks/Cole, Pacific Grove, CA, 1989. xii, 749 pp., \$43.25.

**Persons in Context.** Developmental Processes. Niall Bolger *et al.*, Eds. Cambridge University Press, New York, 1989. xiv, 259 pp., illus. \$39.50. Human Development in Culture and Historical Contexts.

**Plant Biotechnology.** Shain-Dow Kung and Charles J. Arntzen, Eds. Butterworths, Stoneham, MA, 1988. xxiv, 423 pp., illus. \$59.95. Biotechnology, vol. 12.

**A Revolution in Biotechnology.** Jean L. Marx. Published for the International Council of Scientific Unions by Cambridge University Press, New York, 1989. x, 227 pp., illus. \$44.50.

**Social and Economic Development.** An Introduction. Tony Barnett. Guilford, New York, 1989. viii, 232 pp. \$35; paper, \$16.95.

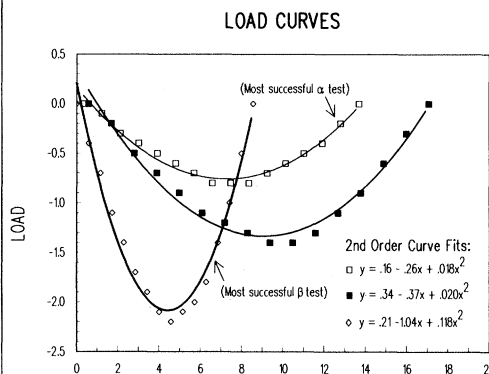
**The Software Factory.** A Fourth Generation Software Engineering Environment. Michael W. Evans. Wiley-Interscience, New York, 1989. xxiv, 308 pp., illus. \$34.95.

**Unrolling Time.** Christiaan Huygens and the Mathematization of Nature. Joella G. Yoder. Cambridge University Press, New York, 1989. xii, 238 pp., illus. \$42.50.

**Uranium Frenzy.** Boom and Bust on the Colorado Plateau. Raye C. Ringholz. Norton, New York, 1989. 310 pp., illus. \$18.95.

**The Year in Immunology 1988.** Immunoregulatory Cytokines and Cell Growth. Julius M. Cruse and Robert E. Lewis, Jr., Eds. Karger, Basel, 1989. viii, 224 pp., illus. \$132. The Year in Immunology, vol. 5.

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## Products & Materials

### 3-D Molecular Simulation and Modeling

POLYGRAF is a software program that simulates the behavior of complex polymer molecules with computational chemistry and three-dimensional (3-D) graphics. It allows scientists to evaluate the relation between a polymer's molecular structure and its properties and behavior. The program can perform full covalent periodic energy calculations, including minimization or dynamics, allowing both the atom locations and the unit cell parameters to vary. Amorphous polymers of random homopolymer or copolymer chains can be created by generating backbone angles by a Monte Carlo procedure or by a rotational isomeric state model. POLYGRAF supports both cross-eyed and wall-eyed stereo techniques. Bio-Design. Circle 438.

### Blotting Apparatus

The Blotting Unit performs DNA and RNA blotting in 2 hours without electric current or a vacuum source. Based on the principle of capillary transfer, the Blotting Unit has an acrylic base with a permanent plastic wick that transfers nucleic acids from the gel onto the membrane more quickly than traditional wicking materials. The Blotting Unit applies pressure evenly over the entire surface of the gel. The apparatus is available in two sizes, a standard unit for transferring a 9.3 by 22 cm gel and a large unit for transferring a 22 by 22 cm gel or two standard gels. BIOS. Circle 460.

### Numeric Computation Software

MATLAB is an interactive software program for performing numeric analysis, matrix computation, signal processing, and graphics. The user enters problems and receives solutions expressed in standard math-

ematical notation. MATLAB can display data in two-dimensional linear, logarithmic, semilog, and polar plots, as well as in three-dimensional mesh and contour graphs. Output can be directed to a dot-matrix printer, pen plotter, or laser printer. The program comes with functions for digital signal processing, filter design and analysis, and spectral analysis. MATLAB operates on Macintosh II, IIx, IIcx, and SE/30 computers with at least 1 megabyte of memory; other versions of the program are available for Macintosh Plus and SE and IBM PC-compatible computers. \$895 (Mac II version). The Math Works. Circle 458.

### Portable Computer with Desktop Features

The T5200 portable personal computer has a built-in hard disk drive, Video Graphics Array (VGA) graphics, a full-function standard keyboard, disk-resident reference manuals, and two IBM-compatible expansion slots, yet weighs only 8.5 kg. The computer has a 1.44-megabyte IBM PS/2-compatible 3.5-inch disk drive and supports the OS/2 software standard. The 2 mega-



bytes of random access memory can be expanded to 8 megabytes with optional 2-megabyte memory modules that leave the expansion slots free. The gas-plasma VGA-compatible screen has a 640 by 480 pixel display, supports 16 gray scales, and features adjustable brightness control. It is detachable, and a VGA color monitor can be attached instead of or in addition to the gas-plasma screen. Besides the port for the extra monitor, the T5200 also has two 9-pin RS-232C serial ports and a port for either a parallel printer or a 5.25-inch disk drive. \$9499 with a 40-megabyte hard disk drive, \$10,999 with a 100-megabyte hard drive. Toshiba America Information Systems, Computer Systems Division. Circle 437.

### Object-Oriented Pascal

QuickPascal is an object-oriented version of the Pascal language that features drop-down menus, dialog boxes, and full mouse support. The compiler, editor, and debugger are integrated into one environment. QuickPascal supports the Object Pascal standard. The language instantaneously color codes keywords, comments, character strings, and user code. A feature called Easy Menus suppresses all menu choices except a subset appropriate for short programs; this allows beginners to work in a simplified environment. The program's windows can be scrolled, resized, rearranged, and overlapped as the user desires. As many as nine editing windows can be open at once. Hypertext on-line help provides context-sensitive documentation. Microsoft. Circle 449.

### Literature

*Radiochemicals 1989* is a catalog of autoradiography supplies, <sup>14</sup>C-labeled organics, scintillation vials and caps, custom radiochemicals, and biochemicals. Sigma Chemical. Circle 485.

*Lab News* is a newsletter profiling products for membrane filtration, chromatography, and bioreactors. Amicon Division, W. R. Grace. Circle 491.

*The UV-Vis Detectors for Liquid Chromatography* is a brochure that describes two variable wavelength ultraviolet-visible light absorbance detectors. Spectra-Physics. Circle 492.

*Catalog #189* features products for chromatography, spectroscopy, environmental analysis, and test and measurement applications. Shimadzu Scientific Instruments. Circle 528.

*Scan Time Monitor* is a newsletter covering infrared applications for methods and process development chemists. Spectra-Tech. Circle 529.

*Products for Cell Science* tells how to select reagents for culturing, stimulating, and isolating cells and subcellular particles. Pharmacia LKB Biotechnology. Circle 530.

*Products for Biotechnology Research* is a catalog that describes  $\beta$  radiation-protection equipment and gel electrophoresis equipment, including nucleic acid sequencing and DNA submarine gel systems. Jordan Scientific. Circle 531.

*Price List 1989* is a catalog of products for chromatography, cell culture, and biochemical analysis. IBF Biotechnics. Circle 533.

*Spring 1989 Catalog* features software programs and utilities for instruction, research, and academic administration. The Clearinghouse for Academic Software. Circle 534.

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

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## Personnel Placement

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

### LINE CLASSIFIED ADVERTISING DEADLINES:

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

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

### LINE CLASSIFIED (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth):

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

### To ESTIMATE ad cost:

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

### CANCELLATION POLICY:

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

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

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

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

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

Blind ad replies should be addressed as follows:

Box (give number)  
**SCIENCE**  
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Washington, DC 20005

## POSITIONS WANTED

**Cell Biologist, Ph.D.** Postdoctoral experience, publications, free-lance writer. Ultrastructural techniques, freeze fracture, electrophysiology. Areas of interest: neuroanatomy, neural development, synapses. Seeks position managing laboratory for scientist and/or writing science papers. Box 113, **SCIENCE**.

**Cytogeneticist, Ph.D.** familiar with human and mouse karyotypes, some familiarity with the karyotype of several other species. Extensive experience with cell cultures and biochemical assays. Box 117, **SCIENCE**.

**Free-Lance Computer Programmer** for research laboratories. Reasonable rates. Prefer C on a PC in New York Metro area. Background in neuroscience and behavioral pharmacology. Pat O'Connor, 1649 Springfield Avenue, Maplewood, NJ 07040.

## POSITIONS WANTED

**Computer Application Specialist** (master's degree) seeking position in academia, industry, or DOD. Current interests include AI (expert systems/neural networking), image processing, and DBMS. Previous programming experience with C, Prolog, Pascal, SAS, object-oriented and relational DB'S. Several published articles on past research. Box 116, **SCIENCE**.

**Physical Chemist/Biochemist, Ph.D.** Experience in quasielastic light scattering, CD, microcalorimetry, enzymology, transient-state enzyme kinetics and computer programming. Strong background in inorganic chemistry. Four years of postdoctoral experience with publications and excellent references. Seeks research position in industry. Box 114, **SCIENCE**.

**Plant Biochemist/Molecular Biologist/Analytical Biochemist.** Highly experienced, innovative in electrophoretic analysis of proteins either SDS-PAGE or IEF. Several years of experience in many areas of plant biology and molecular biology, as evidenced by publications. Seeking academic job or senior-level position (group leader) in industry. Box 115, **SCIENCE**.

## POSITIONS OPEN

**ASSISTANT DIRECTOR, ACADEMIC AFFAIRS,** College of Agriculture and Life Sciences; 12-month appointment with academic rank of associate or full professor; minimum of 5 years of teaching, research, and academic advising experience; previous administrative experience desirable; preference will be given to candidates with a background in life sciences. Duties include working with other members of the administrative team, student recruitment, interaction with student organizations, and other assignments appropriate to the academic office of a major college in a land-grant institution. Nominations and applications should be sent to: **Search Committee for Assistant Director—AAS, Box 7615, North Carolina State University, Raleigh, NC 27695-7615.**

Applications should include a complete curriculum vitae and employment history, a statement not to exceed one page describing the applicant's administrative philosophy, and the names, addresses, and telephone numbers of three persons who may be contacted by the search committee to evaluate the candidate. Proper documentation of identity and employability will be required before the hiring process can be finalized. Closing date for all applications is 15 September 1989. *North Carolina State University is an Affirmative Action/Equal Opportunity Employer.*

## ASSISTANT PROFESSOR OF PHYSIOLOGY

Two tenure-track positions at the rank of assistant professor are available in the Department of Physiology and Biophysics at The University of Tennessee, Memphis. Candidates should have a Ph.D. or M.D. degree and postdoctoral research experience with a background in cellular and/or molecular biology. The abilities to establish an independent research program in the areas of cardiovascular, gastrointestinal, developmental, endocrine or epithelial physiology and to engage in teaching activities of the department are expected. Applicants send curriculum vitae, copies of three representative publications and the names of three references to: **Dr. Leonard R. Johnson, The Thomas A. Gerwin Professor and Chairman, Department of Physiology and Biophysics, 894 Union Avenue, Memphis, TN 38163. An Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.**

## ASSISTANT PROFESSOR WITH BACKGROUND IN MOLECULAR BIOLOGY

The Department of Biochemistry and an NIH-funded Comprehensive Sickle Cell Center at the University of South Alabama invite applications for a faculty position at assistant professor level. Candidates should have postdoctoral experience. Opportunities exist for collaboration with a large interdisciplinary group of investigators as well as participation in graduate and medical education. Interested persons should send curriculum vitae and three letters of recommendation to: **Dr. Joe M. McCord, Chairman, Department of Biochemistry, University of South Alabama, Mobile, AL 36688. The University of South Alabama is an Equal Opportunity Employer.**

## POSITIONS OPEN

The University of Pennsylvania Division of Urology invites applications for a faculty position in urologic oncology at the **ASSISTANT PROFESSOR** level available July 1990. The development of an independent research program will be required, in addition to full clinical responsibilities and participation in medical and postgraduate education. Candidate must be Board-eligible in urology and have completed a 3-year fellowship in urologic oncology, with at least 2 years of basic research, preferably through the AUA Scholar program. Specific interests in mechanisms of metastasis and regulation of tumor growth is desired. Prior research and clinical experience in factors related to urinary bladder hypertrophy preferred to complement ongoing research interests in the division as they relate to growth factor involvement. Please send curriculum vitae, list of publications, and three letters of recommendation to: **Alan J. Wein, M.D., Professor and Chairman, Division of Urology, Hospital of the University of Pennsylvania, 3400 Spruce Street—5 Silverstein, Philadelphia, PA 19104.** An Equal Opportunity/Affirmative Action Employer.

The University of Michigan Medical School, Department of Biological Chemistry, is inviting applications for a faculty position at the rank of **ASSISTANT PROFESSOR**. Candidates should have a Ph.D. in organic chemistry, and have experience in the isolation and characterization of flavoproteins, and in the use of rapid reaction and kinetic isotope effects. A strong interest in, and publications in the area of, enzyme reaction mechanisms are necessary. Teaching obligations will not exceed 5% to 10% of total effort. Send résumé to: **Dr. V. Massey, Department of Biological Chemistry, The University of Michigan Medical School, 3441 Medical Science I, Ann Arbor, MI 48109—0606.** A nondiscriminatory, Affirmative Action Employer.

Applications should be postmarked no later than 1 September 1989.

The Department of Chemistry of The University of Chicago invites applications from outstanding individuals for **ASSISTANT PROFESSOR** (tenure-track) faculty positions in inorganic, organic, physical, and polymer chemistry. Postdoctoral experience is preferred. Applicants should submit curriculum vitae, a list of publications, a succinct outline of their research plans, and should arrange for three letters of recommendation to be sent to: **Graham R. Fleming, Chairman, Department of Chemistry, The University of Chicago, 5735 South Ellis Avenue, Chicago, IL 60637.** An Equal Opportunity/Affirmative Action Employer.

**ASSISTANT PROFESSOR—INHALATION PHARMACOLOGY AND TOXICOLOGY.** Applications are invited from qualified individuals with a Ph.D. degree and at least 2 years of postdoctoral training. Preference will be given to candidates with experience in two or more of the following: inhalation toxicology, pulmonary function testing, pharmacokinetics, and biochemical injury of the lung. Candidates are expected to develop an extramurally funded research program and participate in undergraduate and graduate education. Interested persons should submit curriculum vitae and the names of three references by 31 August 1989, to: **Dr. Randall L. Tackett, Department of Pharmacology/Toxicology, College of Pharmacy, University of Georgia, Athens, GA 30602.** The University of Georgia is an Equal Opportunity/Affirmative Action Institution.

### ASSISTANT/ASSOCIATE PROFESSOR

The Department of Physiology and Biophysics—University of Health Sciences/The Chicago Medical School (UHS/CMS) invites applications for tenure-track assistant or associate professor positions. Candidates must have a Ph.D. or M.D. degree and an established research program. Departmental research interests include: neuroscience, cellular-, molecular- and membrane physiology. UHS/CMS is a 75-year-old private medical school located in new facilities in an elegant suburb north of Chicago. The administration is committed to excellence in science. Outstanding modern laboratories are available and teaching responsibilities are light. Recruitment will continue until suitable candidates are identified. Please send a description of research interests, curriculum vitae, and the names of three references to: **Professor Richard Hawkins, Chairman, Physiology and Biophysics, UHS/CMS, 3333 Green Bay Road, North Chicago, IL 60064.**

## POSITIONS OPEN

### ASSISTANT PROFESSOR SOUTHEASTERN UNIVERSITY OF HEALTH SCIENCES

The college of pharmacy at Southeastern University of Health Sciences invites applications for full-time non-tenure-track position in pharmaceuticals. Applicants must have a strong background in physical pharmacy, pharmaceuticals, nuclear pharmacy, and pharmacokinetics. The individual selected will be expected to accept responsibility for instruction at both undergraduate and graduate levels, develop dosage-forms laboratory, and conduct independent research on some aspect of pharmaceuticals. Candidate must possess a Ph.D. in pharmaceuticals with at least 1 year of teaching experience in pharmaceuticals course and instructing dosage-forms laboratory. Salary is commensurate with experience, with a maximum of \$41,000. Qualified applicants are invited to submit their credentials and three letters of recommendations to: **Dr. Joseph Norwood, Dean, Southeastern University of Health Sciences, School of Pharmacy, 1750 N.E. 168 Street, North Miami Beach, FL 33162.**

An Equal Opportunity and Affirmative Action Employer.

**ASSISTANT/ASSOCIATE PROFESSOR—AGROECOLOGIST (READVERTISE)** Clemson University seeks an agroecologist to lead a multidisciplinary team coordinating research on the long-term stability of agronomic ecosystems and the productive potential of the below-ground ecosystem. The incumbent will teach courses in soil-plant relationships. Research will be directed toward soil-plant processes, long-term consequences of management strategies, determination of material balances and documentation of long-term changes in the soil-plant system resulting from management practices. Preference will be given to those with experience in application of ecological concepts to crop production systems. Tenure-track, 12-month position. Send curriculum vitae, transcripts, and three letters of reference to: **Dr. Horace D. Skipper, Department of Agronomy and Soils, Clemson University, Clemson, SC 29634—0359.** Review of applicants will begin immediately and continue until a candidate is selected. *Clemson University is an Affirmative Action/Equal Opportunity Employer.*

**ASSISTANT/ASSOCIATE PROFESSOR OF FISHERIES.** Oregon State University. Tenure-track. Applications are invited from Fishery Scientists having a Ph.D. degree and demonstrated proficiency in mathematical ecology and modeling of marine fisheries. Position located at Hatfield Marine Science Center, Newport, Oregon, involves modeling shrimp and marine finfish fisheries. Please submit letter of application and curriculum vitae and request three referees to forward letters of recommendation to: **Marine Fisheries Search Committee, Hatfield Marine Science Center, Newport, OR 97365. Telephone: 503-867-3011.** Closing date is 1 September 1989. *OSU is an Affirmative Action/Equal Employment Opportunity Employer.*

**BIOCHEMISTRY FACULTY.** As part of the continuing effort to enhance the vitality of the basic sciences at SUNY Health Science Center at Brooklyn, a major recruitment effort in all of the Basic Science Departments is in progress. Two faculty positions are now available in the Department of Biochemistry at the assistant/associate professor level. Although all areas of interest will be considered, we are especially interested in someone who can develop an independent research program which can attract external support in the areas of molecular biology, protein structure, or membrane biochemistry. Interest in teaching medical and graduate students is essential. The line is a tenure-track position fully supported by State-funds. Our Department has existing strengths in molecular endocrinology, molecular virology, muscle and non-muscle motility, neurochemistry, nucleotide chemistry, protein chemistry, cellular regulatory mechanisms, reactive oxygen species and proteolytic enzymes and inhibitors. Core facilities for protein sequencing, DNA sequencing and oligonucleotide synthesis are available. We offer a competitive salary and benefits package and an opportunity for professional growth. Please address inquiries with a copy of your curriculum vitae, three letters of recommendation, and a short description of your research plans, to: **Dr. A. Stracher, Chairman, Department of Biochemistry, SUNY Health Science Center at Brooklyn, 450 Clarkson Avenue, Box 8, Brooklyn, NY 11203.** Equal Opportunity/Affirmative Action Employer. DMC#C0249.

## POSITIONS OPEN

### ASSISTANT/ASSOCIATE PROFESSOR OF BIOLOGY

The Department of Biological Sciences at The Wichita State University is actively recruiting gifted individuals with demonstrated research and teaching skills in cell and molecular biology specialties (i.e., molecular biology, protein structure, cell structure, and cell culture) for four tenure-eligible positions at the assistant/associate professor level. All positions require significant postdoctoral training in one of the specialty areas, a record of a productive research program using a molecular approach, the ability to interact collegially, and demonstrated capacity to direct a core laboratory in one of the specialties. Appointment at the associate level requires a demonstrated record of funded research activity. Salary competitive with start-up funds available. Deadline for applications is 1 September 1989 or the first of the month until position is filled. Submit curriculum vitae, summary of current and future research, and names of three references to:

**Chairman Search Committee  
Department of Biological Sciences  
The Wichita State University  
Wichita, KS 67208**

*WSU is an Affirmative Action/Equal Opportunity Employer.*

### UNIVERSITY OF TORONTO CENTRE FOR RESEARCH IN NEURODEGENERATIVE DISEASES

Applications are invited for positions in a new neuroscience centre at the University of Toronto with emphasis on research into the etiology and mechanisms of neurodegenerative diseases. Ph.D.'s or M.D.'s at the **ASSISTANT, ASSOCIATE, OR FULL PROFESSOR** level with expertise in molecular genetics, molecular biology and gene regulation are sought. Start-up funds provided. Successful candidates must initiate independent and original research programs.

The Centre is centrally located in the core of the University/Hospital complex in close proximity to more than 150 scientists with programs in molecular and neurobiology research.

Enquiries and curriculum vitae should be directed to: **D. R. McLachlan, Faculty of Medicine, University of Toronto, Room 3318, Medical Sciences Building, 1 King's College Circle, Toronto, Canada, M5S 1A8.** Application deadline: 15 September 1989.

*The University of Toronto encourages both men and women to apply for positions. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.*

### UNIVERSITY OF COLORADO AT BOULDER ATMOSPHERIC/CLIMATE DYNAMICS

The Department of Geography and the Cooperative Institute for Research in Environmental Sciences (CIRES) at the University of Colorado at Boulder are seeking candidates for a tenure-track faculty position to begin in January 1990. The appointment, to be made jointly by the Geography Department and CIRES, is expected to be filled at the **ASSISTANT PROFESSOR** level, but candidates at all levels will be considered.

We are seeking an individual specializing in one of the following subject areas: climate dynamics, surface-atmosphere interactions, or radiative transfer processes relative to global climate. A commitment to both teaching (at undergraduate and graduate levels) and research is required.

Applicants should send curriculum vitae, evidence of past research and teaching experience (including teaching evaluations if available), and arrange to have three letters of recommendation sent to:

**Professor Robert E. Sievers, Director  
Cooperative Institute for Research  
in Environmental Sciences  
University of Colorado at Boulder  
Boulder, CO 80309—0216**

The search committee will begin reviewing applications on 15 August 1989 and continue until the position is filled.

*The University of Colorado has a strong institutional commitment to the principle of diversity. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including women, members of ethnic minorities, and disabled individuals.*

## POSITIONS OPEN

**ASSISTANT/ASSOCIATE PROFESSOR**, human nutrition/metabolism, tenure-track, fall 1990. Teach undergraduate and graduate courses, direct M.S. and Ph.D. students, develop research program in metabolism and macronutrients. Requires Ph.D. in nutrition or related field, postdoctoral experience, demonstrated research productivity and teaching experience preferred. Deadline: 1 December 1989. Send application letter, curriculum vitae, names of three references to: **Dr. Robert D. Reeves, Department of Foods and Nutrition, Justin Hall, Kansas State University, Manhattan, KS 66506-1407. Telephone: 913-532-5508. Equal Employment Opportunity/Affirmative Action Employer.**

**BIOCHEMIST** (Ph.D.) to participate in drug mechanism and pharmacology studies as part of a large collaborative preclinical and clinical research program with Memorial Sloan-Kettering Cancer Center, involving biochemical modulation in cancer therapy. Candidate should have proven expertise with HPLC technology, nucleic acid metabolism, and enzyme analysis. Generous laboratory space, all necessary equipment and technical support will be provided. Excellent salary and fringe benefits. Interested candidates should submit a letter of application, current curriculum vitae, list of publications, and names, addresses, and telephone numbers of at least three recent references to: **Daniel S. Martin, M.D., and Joseph R. Bertino, M.D., 89-15 Woodhaven Boulevard, Woodhaven, NY 11421.**

### CHAIRPERSON—BOTANY SEARCH EXTENDED

The Department of Botany, University of Maryland at College Park (Main Campus) is seeking nominations and applications of scientists qualified to serve as departmental chairperson. The Department currently consists of 29 faculty and 52 graduate students. A substantial number of faculty hold appointments in Maryland Agricultural Experiment Station and the Cooperative Extension Service. Research programs range from whole-plant to subcellular and molecular areas with emphasis in ecology and systematics, cellular and molecular biology and plant pathology. The faculty actively collaborates with scientists at the Smithsonian Institution, USDA, and the University's Biotechnology Institute. Applicants must have a Ph.D. degree and have demonstrated outstanding abilities in research in some field of modern plant biology. Evidence of administrative ability is desirable. Appointment will be made at the professorial level (tenured) with appropriate salary and benefits. For full consideration, submit a letter of application, curriculum vitae, and the names, addresses, and telephone numbers of four references by 1 October 1989 to: **Dr. A. L. Steinhauer, Botany Chair Search Committee, Department of Entomology, University of Maryland, College Park, MD 20742. Telephone: 301-454-3843. An Equal Opportunity/Affirmative Action Employer.**

### CHAIRPERSON DEPARTMENT OF BIOCHEMISTRY

Applications and nominations are invited for the position of Professor and Chairperson, Department of Biochemistry, University of Mississippi Medical Center. The successful candidate should be an established investigator and offer leadership in the continued development of outstanding programs for research and education in the biochemical sciences. Applicants should send a résumé and the names of three references by 1 November 1989 to: **Dr. William Clem, Chairman, Search Committee, of Microbiology, University of Mississippi Medical Center, Jackson, MS 39216-4505. Equal Opportunity Employer, M/F/H/V.**

**CLINICAL/MOLECULAR MICROBIOLOGIST POSITION**, Mayo Clinic in the Bacteriology Laboratory, Department of Laboratory Medicine and Pathology. Incumbent will direct a special tests area in the clinical laboratory and be expected to develop applications of molecular biology to clinical diagnostic testing. Applicants must have a doctorate (M.D. or Ph.D.), appropriate postgraduate experience, and interact well with clinicians. Please send curriculum vitae and names of three references to: **George G. Klee, M.D., Ph.D., Chairman, Clinical Microbiology Search Committee, Division of Laboratory Medicine, Mayo Clinic, Rochester, MN 55905. An Equal Opportunity/Affirmative Action Employer.**

## THE AUSTRALIAN NATIONAL UNIVERSITY RESEARCH SCHOOL OF CHEMISTRY POSTDOCTORAL RESEARCH POSITIONS

Applications are invited for appointment to postdoctoral fellowships and research fellowships in the Research School of Chemistry. Current tenured Faculty and their major research interests are:

Professor A.L.J. Beckwith (Physical Organic Chemistry); Dr M.A. Bennett (Organo-transition Metal Chemistry); Dr R. Bramley (Photophysics and Time-resolved EPR); Dr L.R. Brown (Nuclear Magnetic Resonance; Structure and Dynamics of (Bio) Macro-molecules); Dr M.A. Collins (Chemical Physics, Dynamics); Dr N.E. Dixon (Protein Chemistry, Enzymology and Molecular Genetics); Dr D.J. Evans (Liquid State Chemical Physics); Dr G.A. Heath (Inorganic Electrochemistry); Professor B.G. Hyde, Dr A.C. McLaren (Inorganic Solid State Chemistry); Dr E.R. Krausz (Optical Spectroscopy); Dr J.K. MacLeod (Chemistry of Biologically-active Compounds, Mass Spectrometry); Professor L.N. Mander (Synthetic Organic Chemistry); Dr L. Radom (Theoretical Organic Chemistry); Mr R.W. Rickards (Bio-organic Chemistry); Dr G.B. Robertson (Crystallography); Professor A.M. Sargeson (Coordination and Biomimetic Chemistry); Dr T.R. Welberry (Disordered Materials); Professor J.W. White (Solid State Molecular Science); Dr S.B. Wild (Synthetic Inorganic Chemistry).

Salary: Research Fellow \$A31,259 – \$A40,622 p.a.; Postdoctoral Fellow Grade 1 (fixed point) \$A27,139 – \$A30,882 p.a. Grants are provided towards travel and removal. Appointment: Research Fellow up to three years, possibility of extension to five years; Postdoctoral Fellow normally two years, possibility of extension to three years.

Applications should be submitted in duplicate to the Registrar, The Australian National University, GPO Box 4, Canberra ACT 2601, Australia, quoting reference number RC.27.6.1. They should include a curriculum vitae, list of publications and statement of research interests, the names and addresses of three academic referees, and the probable date on which an appointment could be taken up. The source of the advertisement should also be mentioned. Closing date: 30 SEPTEMBER 1989. 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.

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## PULMONARY PHARMACOLOGY

ICI Pharmaceuticals Group is dedicated to the challenge of discovering and developing important new therapeutic agents. Expansion of our research efforts in pulmonary therapies has created excellent opportunities for:

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**Pharmacological effects of potassium channel modulators in *in vitro* and *in vivo* paradigms:** Experience with rubidium efflux techniques required.

**Airway hyperresponsiveness:** Development of models and acquisition of *in vitro* and *in vivo* information relevant to the mechanisms of airway hyperresponsiveness. Knowledge of pulmonary pharmacology/physiology required.

### BS/MS Pharmacologists

Positions require a degree in a biological science with background in pulmonary pharmacology.

**Studies of asthma/airway hyperresponsiveness at *in vitro* and *in vivo* levels:** Requires background in pulmonary pharmacology.

**Peptide- and lipid-hormone receptor assays:** Strong biochemical background required. Experience with radioligand binding and HPLC assays an asset.

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Please send your resume with salary requirement, indicating your field of interest, to: **Mary S. Carroll, ICI Pharmaceuticals Group, Wilmington, DE 19897.**



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GEN-PROBE offers an exciting work environment, excellent benefits and competitive salaries. Please send your resume to: **GEN-PROBE, INC., Human Resources Department 180, 9880 Campus Point Drive, San Diego, CA 92121.**



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These positions are exciting opportunities for molecular biologists to combine teaching, marketing, and travel. Responsibilities include scheduling, developing and teaching 4-day training programs in recombinant DNA technology. The ideal candidates will have a Ph.D. in molecular biology or a related field, teaching and extensive laboratory experience in gene cloning, and exceptional organizational and interpersonal skills. Approximately 30-50% travel is required. Relocation expenses paid.

Interested candidates with the required background should contact:

Workshop Instructor  
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## Baxter Hyland Division — A Vital Force In A Vital Industry

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We currently have openings in Cell Culture, Process Analysis and Product Formulation. Two new start-up operations in Molecular Biology and Immunology have also created several openings for scientists and lead scientists to join our team of professionals. Positions range from entry-level to managerial.

### MANUFACTURING & PRODUCTION— Project Manager, Technology Transfer

In this position, you will oversee the technical transfer of immunoaffinity purification processes developed for human plasma proteins, conduct feasibility and scale-up experiments in a pilot plant environment, and prepare reports/data analysis.

To qualify, you must have a technical degree or equivalent experience (Ph.D. in Protein Chemistry, or M.S. with 7+ years in protein purification); experience managing project activity; working knowledge of lab and production equipment; and demonstrated problem-solving, communication, and motivational skills. QA/GMP background desirable.

Our compensation plan reflects the strength and size of the worldwide Baxter Healthcare Corporation organization. To find out more, send your resume with salary history to: **Baxter Hyland Division, Human Resources (CG), 4501 W. Colorado Blvd., Los Angeles, CA 90039.** An Equal Opportunity Employer.

Hyland Division

# Baxter

## POSITIONS OPEN

**BIOCOMPUTING APPLICATIONS MANAGER.** The Molecular Biology Computing Laboratory (MBCL), a joint activity of the Waksman Institute at Rutgers University and the Center for Advanced Biotechnology and Medicine (CABM), is seeking an individual for its developing computing facilities. Working under broad direction from the Director, the successful candidate will select, acquire, install, and manage software and databases for computing applications in molecular biology, including such areas as sequence analysis, macromolecular structure, molecular graphics, simulation and statistics. This work will include the preparation of documentation and the development of courses for researchers and students. The successful candidate will also work with biological researchers and MBCL staff to develop new applications in support of, and as a participant in, molecular biology research, and will be expected to maintain an awareness of new research requirements and technologies of interest.

Applicants should hold an advanced degree in molecular biology, computer science, or a related field, and should have at least 2 years of experience in molecular biology computing. Candidates with bachelor's degrees who can demonstrate extensive relevant experience will also be considered. Applicants should understand molecular biology research strategies, and possess some experience in sequence analysis, scientific programming, molecular graphics, or computational chemistry. Good interpersonal and verbal skills are essential.

The salary range for this position is \$39,252 to \$52,987. Please send a résumé and names of three references before 15 August 1989 to: **Rutgers, The State University of New Jersey, Division of Personnel Services, Piscataway, NJ 08855, indicating Reference Number 373.** *Rutgers University is an Affirmative Action/Equal Opportunity Employer.*

### UNIVERSITY OF LOUISVILLE CHAIRPERSON, DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY

The University of Louisville School of Medicine is currently searching for a Professor and Chair for its Department of Microbiology and Immunology. Requirements for this position include a doctorate (or an equivalent degree) in microbiology, immunology, or a related area, as well as academic qualifications commensurate with the rank of professor of microbiology and immunology. Scientific leadership, administrative ability, continuous grant support, and excellence in teaching are essential qualities for the person assuming this important leadership position in the University of Louisville School of Medicine.

If interested, please send a letter of application, list of four professional references, summary of research support, and current curriculum vitae, including a description of your professional leadership and research interests to: **Russell A. Prough, Ph.D., Chair, Microbiology and Immunology Search Committee, Office of the Dean, School of Medicine, University of Louisville, Louisville, KY 40292.**

The deadline for receipt of all materials is 30 September 1989. *The University of Louisville is an Affirmative Action/Equal Opportunity Employer.*

**ECOLOGY POSTDOCTORAL:** Three-year postdoctoral position for execution of field ecosystem studies in the Serengeti National Park, Tanzania. Minimum qualifications: Ph.D. in ecology with field research experience. Rigorous physical activity required. Experience in African savanna ecosystems desirable. Send curriculum vitae, statement of background, experience, interests, and three reference letters to: **Professor S. J. McNaughton, Biological Research Laboratories, Syracuse University, Syracuse, NY 13244-1220.** Deadline for applications and references: 15 October 1989; field arrival: 1 January 1990.

*Syracuse University is an Affirmative Action/Equal Opportunity Employer.*

**EXECUTIVE DIRECTOR**—For international scientific organization located in Washington, D.C. Strong administrative and communications skills, plus experience in scientific-related fields such as nutrition and/or toxicology essential. Write: **Ms. S. Lopez, International Life Sciences Institute, 1126 16th Street, NW, Washington, D.C. 20036.**

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The successful applicant will design, monitor, interpret and evaluate Clinical Trials; write Clinical Protocols; prepare and submit reports to the FDA; interface with clinical and pre-clinical Investigators; and supervise the monitoring team. Up to 30% travel is required.

## CLINICAL RESEARCH ASSOCIATES

### Immunology & Oncology

Requirements include a Bachelor's degree in a physical/biological science with at least 2 years laboratory or clinical research experience. New Master's graduates without experience will be considered. Computer literacy preferred. The ability to interpret/evaluate laboratory and clinical data along with an understanding of experimental design logic is also required. Approximately 25% travel is required.

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Oak Ridge National Laboratory (ORNL), part of the Department of Energy, and managed by Martin Marietta Energy Systems, engages in basic and applied research for DOE and other federal agencies. ORNL has an excellent opportunity for a qualified Research Specialist to conduct interdisciplinary research in advanced computing for the social sciences.

You will research automated knowledge elicitation, machine learning with an emphasis on genetic algorithms, expert systems, cognitive science, decision making, computer security, household energy use and uncertainty. You will also develop other applications of advanced computing for social science programs, including supercomputing and natural language processing.

Candidates with a PhD in social science, computer science or related fields and a background in artificial intelligence, other advanced computing fields or the social sciences will be preferred. Exceptional candidates, regardless of educational background, are also encouraged to apply.

ORNL provides the opportunity to conduct full-time research and encourages interaction with the nation's universities. In addition to providing extensive on-site library services, we also offer a competitive salary and benefits package. For immediate consideration, send your resume to: **Martin Marietta Energy Systems, P.O. Box 2002, Dept. SC-804, Oak Ridge, TN 37831-6501.** An equal opportunity employer. U.S. citizenship required.

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The group will have modern laboratory facilities, operating expenses, and funding for scientific and technical co-workers.

Applications, including a tabular curriculum vitae, list of publications, and a description of major scientific achievements and future research plans, should be submitted until

**September 15, 1989,**

to:

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Förderung der Wissenschaften e.V.  
– Generalverwaltung –  
Postfach 647  
D-8000 München 1.

**UNIVERSITY OF HAWAII, CANCER RESEARCH CENTER OF HAWAII  
TENURE TRACK LABORATORY RESEARCH POSITIONS  
NOW AVAILABLE**

**HEAD, NATURAL PRODUCT PHARMACOLOGY LABORATORY**

The Natural Product Pharmacology Laboratory is responsible for developing a system to screen and pharmacologically characterize marine and other natural products isolated primarily in the University of Hawaii's Chemistry, Marine Biology, and Tropical Agriculture programs. It is anticipated that a panel of in vitro and animal cancer models will be used along with limited small animal toxicology models.

Applicants should have a record of accomplishment in the pharmacology of natural products and a strong background and interest in marine biology and anticancer applications.

**HEAD, PREVENTION AND CONTROL LABORATORY**

The Prevention and Control Laboratory is responsible for developing in vitro and in vivo models of cancer progression to help identify new chemopreventive compounds for clinical testing. These models would also be used to identify intermediate endpoints which could be used to monitor clinical testing and which could be adapted to early detection tests for high risk populations. An initial focus of the laboratory is gastric cancer but colorectal and other cancers are also planned for study as resources are developed.

Applicants should have a record of accomplishment in tumor biology with a background and interest in developing in vitro and in vivo models of cancer progression.

**HEAD, CLINICAL PHARMACOLOGY LABORATORY**

The Clinical Pharmacology Laboratory is responsible for the pharmacokinetics, metabolism, and in vitro sensitivity (drug resistance) testing to support clinical trials. It is anticipated that animal models would also be used for pilot work in this area. An appropriate focus for the laboratory would be to study the pharmacokinetic, metabolic, and chemosensitivity differences in Hawaii's multi-ethnic population.

Applicants should have a strong background in clinical pharmacology and appropriate experience with anticancer drugs and biologics.

**HEAD, IMMUNOLOGY LABORATORY**

The Immunology Laboratory is responsible for developing cellular and molecular immunological assays appropriate to support the clinical testing of immuno-modulators. An additional focus would be to study immune function in Hawaii's multi-ethnic population to determine whether the remarkable cancer incidence and mortality differences observed in Hawaii might be related to ethnic differences in host defense mechanisms.

Applicants should have a record of accomplishment in applied immunology research and experience with the clinical testing of anticancer cytokines and antibody based reagents.

**GENERAL CONDITIONS**

It is anticipated that successful candidates will hold instructional appointments at the John A. Burns School of Medicine or other appropriate school of the University of Hawaii.

Minimum requirements include an M.D. or Ph.D. in an appropriate biomedical science area and at least three years of relevant experience. Rank and salary will be commensurate with experience.

Interested applicants should send a curriculum vitae and a list of three persons from whom references can be obtained to: Chair, Applied Laboratory Program Recruitment, Cancer Research Center of Hawaii, 1236 Lauhala Street, Honolulu, Hawaii 96813. Closing Date: September 30, 1989 or until position is filled.



The University  
of Sydney,  
Australia

**CHAIR OF  
VETERINARY  
PHYSIOLOGY**

**Reference No. 25/01**

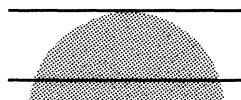
Applications and expressions of interest are invited for the Chair of Veterinary Physiology which will become vacant in 1990.

Salary will be at the rate of \$A63,919 per annum. Assistance with re-location expenses in Sydney will be provided.

The University reserves the right not to proceed with any appointment for financial or other reasons.

Applications in triplicate, including curriculum vitae, list of publications and the names of three referees by 31 August 1989 (late applications will be considered) to the Registrar, University of Sydney, NSW 2006, Australia, from whom a detailed statement of information concerning the Chair should be obtained.

*Equal employment opportunity is  
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**Molecular Biologist**

Lederle Laboratories is a company dedicated to the discovery and development of new pharmaceuticals that will be used for the health and well-being of people everywhere. Currently the Medical Research Division is seeking a Molecular Biologist who will become involved in the research and development of eukaryotic expression systems.

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## POSITIONS OPEN

### CELLULAR NEUROBIOLOGIST UNIVERSITY OF MICHIGAN

The University of Michigan, Department of Physiology, is seeking to fill a tenure-track assistant professorship in cellular neurobiology. We are specifically seeking an individual studying neurosecretion at the cellular level and utilizing a combination of patch-clamp and fluorescent probe techniques. A strong background in computer interfacing is essential. The candidate must be capable of interacting with both neurobiologists and cellular physiologists studying regulated secretion by glandular cells. Research experience with both vertebrate and invertebrate neurosecretory systems is highly desirable. Candidates should have a Ph.D., M.D., or equivalent degree and a minimum of 3 years of postdoctoral experience. The successful candidate is expected to develop an independent research program and participate in graduate and professional teaching programs of the department. Applications, including curriculum vitae, description of research interests, plans for future research, and names of three references should be sent to:

John A. Williams, M.D., Ph.D.  
Professor and Chairman  
Department of Physiology  
7744 Medical Science II  
University of Michigan  
Ann Arbor, MI 48109-0622

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

### DIRECTOR—MOLECULAR BIOLOGY

The Institute of Molecular Biology (IMB), Academia Sinica, Taipei, Taiwan, R. O. C. is seeking nominations and applications of scientists qualified to serve as director. IMB consists of 17 principal investigators (with seven more open positions) and a total of about 100 scientific and technical personnel, well supported by stable funding sources and with potential for growth. Research programs include studying the regulatory mechanisms of gene expression in different systems (mammals, plants, *Drosophila*, yeast, viruses, etc.), and analyzing the structures of nucleic acids and proteins by a number of methods including x-ray crystallography. The 70,000-square-foot building is well designed and equipped with modern instruments and facilities. Applicants should have a doctoral degree and have demonstrated outstanding abilities in research in the areas of molecular biology. Evidence of administrative ability and familiarity with the Taiwan environment are very essential requirements. Letters of nomination and application should include curriculum vitae as well as the names, addresses, and telephone numbers of four references. Review of applications will begin on 1 November 1989 and continue until a suitable candidate is recruited. Applications and nominations should be sent in care of: Dr. Chien Ho, Department of Biological Sciences, Carnegie Mellon University, 4400 Fifth Avenue, Pittsburgh, PA 15213. Telephone: 412-268-3395.

### ENDOWED CHAIR UNIVERSITY OF FLORIDA

The Department of Fruit Crops, University of Florida, invites applications and nominations for the C. V. Griffin Endowed Chair in Citrus. The eminent professor filling this position will provide leadership in developing an innovative program in molecular, cellular, or whole-plant biology on cold hardiness/acclimation of citrus. The incumbent will interact closely with existing faculty conducting citrus research and education programs in Florida and be expected to develop a strong graduate program in research and teaching. Qualifications include a Ph.D. with an outstanding record of professional accomplishments and evidence of national and international leadership in molecular, cellular, or whole-plant biology, a proven record for attracting extramural support for research and graduate education programs, and a strong commitment to graduate education. Funding and continuing research support are derived from a one-million-dollar endowment in addition to salary and technical support. Applications should include a complete résumé and names and addresses of five references. Application deadline is 1 November 1989 or until a suitable candidate is found. Send nominations or applications to: Dr. F. S. Davies, Chairman, Search Committee, 1137 Fifield Hall, University of Florida, Gainesville, FL 32611. Telephone: 904-392-4711.

## POSITIONS OPEN

**FACULTY POSITION.** Cornell University, New York State Agricultural Experiment Station, Geneva, New York, has an opening for a 12-month tenure-track faculty position.

**VEGETABLE CROP PHYSIOLOGIST.** Tenure-track faculty position, 100% research, 12-month appointment. The Department of Horticultural Sciences seeks applicants for an assistant professor, 100% research position. The successful applicant is expected to investigate physiological processes that may either enhance or limit the productivity of New York vegetables. The research, conducted primarily in the context of the whole plant, should emphasize the roles of factors such as plant architecture, microclimate, environmental stress, and genotypic differences on growth and development. An important goal of the research should be to improve vegetable product quality. A Ph.D. in plant physiology, horticulture, agronomy, or related plant sciences is required. Training and experience with modern physiological and biochemical instrumentation and techniques is essential. Cooperation is expected with scientists within the department and with food scientists. Training in vegetable physiology and production is desirable.

Applicants should submit résumé, research statement, copies of publications and manuscripts, and the names and addresses of four references to: Dr. Robert A. Plane, Director, New York State Agricultural Experiment Station, Geneva, NY 14456. Telephone: 315-787-2210.

*Cornell University is an Equal Opportunity/Affirmative Action Employer. Minorities, women, and the handicapped are encouraged to apply.*

### FACULTY NEUROSCIENTIST

The Division of Neurosurgery of University of South Florida College of Medicine is seeking an established neuroscientist for a full-time tenure-earning position with rank and salary commensurate to credentials and appointment in both neurosurgery and appropriate basic science discipline. Duties will include administration and guidance of the division's research laboratories, teaching of postdoctoral M.D. and Ph.D. fellows, and active independent research following the established research programs within the division and within the school. An interest in neural tissue transplantation is desirable, but not mandatory.

David W. Cahill, M.D., F.A.C.S.  
Director  
Division of Neurosurgery  
University of South Florida  
1 Davis Boulevard, Suite 710  
Tampa, FL 33606

**FACULTY POSITION: ORGANIC CHEMISTRY.** The Department of Chemistry at Penn State University has an opening for a tenure-track faculty position starting August 1990. Candidates must possess a doctorate; subsequent postdoctoral experience is preferred. The appointee must establish a vigorous program of research in any field of organic chemistry. Commitment to excellence in undergraduate and graduate teaching is essential. Apply with complete résumé, undergraduate and graduate transcripts, a description of research plans, plus three letters of recommendation. Deadline for receipt of applications is 17 October 1989, or until a suitable candidate is identified. Send applications to: Chairman of the Search Committee, Department of Chemistry, 152 Davey Laboratory, Box 2, Penn State University, University Park, PA 16802. An Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

**FACULTY POSITIONS.** The Department of Biology at the University of North Carolina at Charlotte (UNCC) invites applications for three tenure-track faculty positions: VERTEBRATE PHYSIOLOGY, BACTERIOLOGY, AND MOLECULAR GENETICS. These positions are at the assistant professor level and will begin in the fall semester, 1990. Ph.D. required and postdoctoral experience preferred. Successful candidates will participate in teaching undergraduate and graduate courses and develop strong research programs that will attract external funding. Send letter, curriculum vitae, transcripts, evidence of teaching effectiveness, a summary of research plans, and names of three references by 1 October 1990 to the Chair of the appropriate search committee, Department of Biology, UNCC, Charlotte, NC 28223. UNCC is an Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN

### FACULTY POSITION

The University of North Carolina at Chapel Hill invites applications for two junior or senior tenure-track faculty positions in the Department of Cell Biology and Anatomy. Appointees will be expected to establish or have a funded research program in a modern area of cell or developmental biology and to participate in the teaching of histology to first-year medical students. All applicants are welcome, but preference will be given to those employing techniques in molecular biology and biotechnology. Women and minorities are encouraged to identify themselves. Send curriculum vitae, a brief description of research plans, and the names of three references by 1 September 1989 to: Dr. Charles R. Hackenbrock, Chair, Department of Cell Biology and Anatomy, School of Medicine, 108 Swing Building, CB #7090, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-7090. An Equal Opportunity/Affirmative Action Employer.

### FACULTY POSITION IN PHARMACOKINETICS SOUTHEASTERN COLLEGE OF PHARMACY

The Southeastern College of Pharmacy invites applications and nominations for a full-time (12-month) faculty position in pharmacokinetics. The successful candidate must have an in-depth understanding of pharmacokinetic theory and will have research interests in some aspects of applied pharmacokinetics. A Ph.D. degree in pharmacokinetics, pharmacuetics with at least 1 year of teaching experience in pharmacuetics, chemical engineering or other appropriate discipline, or a Pharm.D. degree with relevant research experience is expected. Candidates who are skilled in computer-based pharmacokinetic modeling or who have a strong background in data analysis are encouraged to apply. A professional degree in pharmacy is desirable but not essential. Candidates should be dedicated to excellence in teaching and will be expected to make serious scholarly contributions to their area of specialization. Salary and rank are commensurate with qualifications. Interested individuals should submit a letter of application and curriculum vitae, and arrange to have three letters of recommendation forwarded to: Fred F. Farris, Ph.D., Associate Dean for Pharmaceutical Sciences, Southeastern College of Pharmacy, 1750 N.E. 168 Street, North Miami Beach, FL 33162.

*Southeastern College is an Equal Opportunity Employer*

**FACULTY POSITION: MOLECULAR VIROLOGY OF PAPILLOMAVIRUSES.** The Division of Molecular Virology at Baylor College of Medicine invites applications for a tenure-track faculty position; rank dependent upon qualifications. An innovative scientist is sought with training and research interest in molecular aspects of gene expression or pathogenesis of papillomavirus infections. Applicants should have a Ph.D. with at least 2 years of productive postdoctoral experience in molecular virology. The successful applicant is expected to establish an independent research program and to participate in graduate training in an expanding academic department. Newly renovated laboratories, well-equipped support facilities, and opportunities for clinical collaborations are available. Current faculty research activities focus on the molecular basis of viral replication, viral and cellular oncogenes, viral pathogenesis, viral vectors for gene therapy, and modern approaches to viral vaccines. Send curriculum vitae, names/addresses of at least three references, and a description of current research activities and future plans by 1 September 1989 to: Dr. Janet Butel, Head, Division of Molecular Virology, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030. An Equal Opportunity/Affirmative Action Employer.

### FOREST ENTOMOLOGIST/ECOLOGIST

Postdoctoral position available to investigate southern pine beetle biology in winter and spring seasons. Specific research may focus on effects of host-tree properties on beetle reproduction and mortality, impact of insect natural enemies and fungal symbionts on beetle population dynamics. Results to be incorporated into a computer-based predictive model of beetle infestation growth. Two years of funding assured. Ability to direct field research and physical strength to climb and sample bark beetles in trees required. Statement of interest, résumé, transcripts, and names of four references to: Dr. F. M. Stephen, Entomology A-320, University of Arkansas, Fayetteville, AR 72701.



Deutsches  
Krebsforschungszentrum  
Stiftung des öffentlichen Rechts

The Deutsches Krebsforschungszentrum  
(German Cancer Research Center) offers a  
position of a

### Professorship (C4) in Tumorvirology

with the projected Institute for Applied  
Tumorvirology presently under construction.

The selected candidate will head the division  
"Tumorvirology I". The appointment will be  
made jointly with the Faculty of Theoretical  
Medicine of the University of Heidelberg.

Applicants should be qualified by outstanding  
contributions to the field of tumorvirology or  
related areas (molecularbiology, tumorvirus  
immunology, applied tumorvirology.)

Applications including the curriculum vitae,  
bibliography and references should be sub-  
mitted not later than August 31, 1989 to Prof.  
H. zur Hausen, Stiftungsvorstand, Deutsches  
Krebsforschungszentrum, Im Neuenheimer  
Feld 280, 6900 Heidelberg, West Germany.

## THE AUSTRALIAN NATIONAL UNIVERSITY

Applications are invited for appointment to the following positions:

### FELLOW/SENIOR FELLOW (2 positions)

#### Ecosystem Dynamics Group, Research School of Biological Sciences

The School is seeking to strengthen its program in the ecology of the dynamics of terrestrial ecosystems. An Ecosystem Dynamics Group of about eight academic staff has been established to investigate the processes of establishment, development and rehabilitation of particular ecosystems and to develop predictive models of changes in terrestrial ecosystems. Interests within the group include modelling ecosystem processes, the dynamics of plant populations, field ecophysiology, and plant-animal interactions. A major part of the Group's activities concentrate on eucalypt forests and woodlands. It is likely that the Australian biota will continue to be the main focus. One appointee (Senior Fellow/Fellow) will have a strong background in terrestrial ecology, and the ability to establish experimental and field programs that will contribute to the Group's objectives. The other appointment (Fellow) will be made in quantitative ecology or related areas. The successful applicant will have a strong background in mathematical ecology, ecological modelling, or geographical or biological information systems. Both appointees will have an impressive record of continuing research achievement. They will be expected to have demonstrated the ability and willingness to work collaboratively and they will be expected to participate actively in PhD and postdoctoral training. Further particulars may be obtained from the School Secretary, RSBS telephone: (062) 49 4138 or facsimile: 61-62 49 0758 or 48 9995. Closing date: 30 September 1989. Ref: BS 6.7.1. SALARY: Senior Fellow; A\$48,086 – A\$55,814 p.a.; Fellow; A\$36,205 – A\$48,025 p.a.; APPOINTMENT: Fellow/Senior Fellow, tenurable. APPLICATIONS should be submitted in duplicate to the Registrar, The Australian National University, GPO Box 4, Canberra ACT 2601, Australia, 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.

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## ABBOTT LABORATORIES

Abbott Laboratories' Chemical & Agricultural Products Division is a worldwide leader in the manufacture of biorational pesticides and bulk pharmaceuticals. With a reputation for developing ecologically safe products, our success continues to grow. Our extensive technical resources create a superior environment for those who would like to make a significant personal and professional commitment.

### Assistant Scientist / Scientist

The individual we seek will undertake immunological studies in association with studies on the biochemistry of bacterial toxins and their interactions with target cells. The qualified candidate will be involved in development of immunological assays, purification of toxins and derivatives, as well as the development of applications for novel immunological technologies. You will need an M.S. or equivalent, and a strong background in immunology. Technical experience should include antibody and general protein purification procedures, and the development of immunoassays. Knowledge of hybridoma technology or idiotypic mimicry would be highly desired. **Please reply to Job 7620.**

### Development Chemist

This position requires an M.S. or Ph.D. in Medicinal or Synthetic Organic Chemistry with at least 3 years of process development research experience, including pilot plant scale-up. Broad synthetic and analytical experience and working knowledge of regulatory, GMP, safety, and environmental factors essential. Responsibilities include the development of processes or manufacture/purification of new and existing bulk drug products. **Please reply to Job 7630.**

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

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## POSITIONS OPEN

### FACULTY POSITIONS DEPARTMENT OF BIOCHEMISTRY SUNY AT BUFFALO

Two tenure-track positions at the assistant or associate professor level are available in the Department of Biochemistry, Schools of Medicine and Biomedical Sciences at the State University of New York (SUNY) at Buffalo. Applications in any area of molecular biology and biochemistry will be considered. Responsibilities include developing a productive research program with extramural funding, training Ph.D. candidates, and teaching graduate, undergraduate, and professional students. Applicants should submit curriculum vitae, a statement of research plans and objectives, reprints and pre-prints, and have three letters of reference sent to:

**Dr. Edward G. Niles, Chairman**  
Department of Biochemistry Search Committee  
140 Farber Hall  
SUNY at Buffalo, NY 14214

Deadline for completed applications is 30 September 1989.

*Women, minority, and handicapped scientists are encouraged to apply.*

*An Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITIONS IN CUTANEOUS SCIENCES AT UNIVERSITY OF ALBERTA

The Division of Dermatology and Cutaneous Sciences, the University of Alberta in Edmonton, invites applications for faculty positions at both junior and senior levels (assistant professor, associate professor, and professor) to develop a research group in Dermatology and Cutaneous Sciences. The successful candidates, Ph.D. or M.D. scientists, will conduct basic research relating to the histopathogenesis, early laboratory diagnosis, and experimental therapeutic approaches of skin cancer. Facilities in the newly renovated Dermatology and Cutaneous Sciences are excellent. Responsibilities include graduate teaching and supervision. Submit curriculum vitae, representative reprints, a brief outline of research accomplishments and research approaches, and names of three references to:

**Kowichi Jimbow, M.D., Ph.D.**  
Division of Dermatology and Cutaneous Sciences  
418 Newton Research Building  
University of Alberta  
Edmonton, Alberta T6G 2C2  
Telephone: 403-492-2425

### INSTRUCTOR—NON-TENURED

The University of Tennessee, Memphis, Department of Physiology and Biophysics will have a non-tenured faculty position available 1 September 1990. Assignment will be to the laboratory of **Dr. C. W. Leffler**, Professor. Requirements are experience in RIA of prostanooids, microsphere determination of cerebral blood flow, and cranial window procedures. Applicants should have independent grant support or high potential for achieving such within the first year. Applicants apply to: **Dr. Leonard R. Johnson, Thomas A. Gerwin, Professor and Chairman, Department of Physiology and Biophysics, University of Tennessee, Memphis, 894 Union Avenue, Memphis, TN 38163.** *An Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.*

### MICROBIAL GENETICIST

A tenure-track assistant professorship is available beginning January 1990. The Ph.D. is required with postdoctoral experience favored. The individual will be expected to teach undergraduate and graduate courses in microbial genetics and to develop an active research program in microbial molecular biology. A commitment to excellence in teaching and research is required. To assure full consideration, send curriculum vitae, statement of research goals, transcripts, and names of three references by 1 September 1989.

**Microbiology Search Committee**  
Department of Botany and Microbiology  
Oklahoma State University  
Stillwater, OK 74078

*An Equal Opportunity/Affirmative Action Employer.*



## NATIONAL UNIVERSITY OF SINGAPORE DEPARTMENT OF MICROBIOLOGY

Applications are invited for appointment as Senior Lecturer or Associate Professor in the Department of Microbiology. Candidates should possess a higher academic/professional qualification in Microbiology. Preference will be given to those who have experience in electron microscopy. The appointee will be required to teach microbiology at the undergraduate and postgraduate levels, and will also be expected to engage in research and development of electron microscopy.

Gross annual emoluments range as follows:

**Senior Lecturer S\$58,680 — 100,310**  
**Associate Professor S\$88,650 — 122,870**  
(US\$1.00 = S\$2.00 approximately)

The commencing salary will depend on the candidate's qualifications, experience and the level of appointment offered. In addition, appointees with a basic medical degree and an approved higher academic/professional qualification may receive a fixed annual clinical allowance as follows:

**Senior Lecturer S\$15,000**  
**Associate Professor S\$21,000**

Leave and medical benefits will be provided. Depending on the type of contract offered, other benefits may include: provident fund benefits or an end-of-contract gratuity, a settling-in allowance of S\$1,000 or S\$2,000, subsidised housing at nominal rentals ranging from S\$100 to S\$216 p.m., education allowance for up to three children subject to a maximum of S\$10,000 per annum per child, passage assistance and baggage allowance for the transportation of personal effects to Singapore.

The Department of Microbiology is a department in the Faculty of Medicine. There are 8 faculties in the National University of Singapore with a current student enrolment of some 14,000. All departments are well-equipped with a wide range of facilities to enhance the teaching and research activities of staff members. The University is linked to BITNET, an international network that interconnects almost 500 mainframe computers at 200 institutions of higher learning and research centres around the world.

Application forms and further information on terms and conditions of service may be obtained from:

**The Director**  
Personnel Department  
NATIONAL UNIVERSITY  
OF SINGAPORE  
10 Kent Ridge Crescent, Singapore 0511

**The Director**  
NATIONAL UNIVERSITY OF SINGAPORE  
780 Third Avenue, Suite 2403  
New York, N.Y. 10017, U.S.A.  
Tel: (212) 751-0331

Enquiries may also be sent through BITNET to: **PERSDEPT @ NUSVM.**

## Section Leader Research & Development

Becton Dickinson Diagnostic Instrument Systems division is a leading manufacturer of instrumented systems for the early detection of disease. If you share our care and commitment, we can offer an exceptional challenge at our Towson, Maryland facility where you'll direct a research group in the development of a novel automated system for the detection of bacteria in blood cultures.

In this lead role, you will identify, evaluate, and develop novel chemical and physical sensors of bacterial growth, and will participate in the development and evaluation of suitable instrumentation. Your duties will include management of a research team and the preparation of plans, written reports, and technical briefings for management.

A PhD in Organic Chemistry, Biochemistry or a related discipline is required together with at least 3 years post-doctoral experience. You must be able to conduct independent research and supervise all experiments; working knowledge of organic chemistry/polymer chemistry, fluorescence spectroscopy, and biochemistry/microbiology is preferred.

We reward superior talent with an excellent salary and comprehensive benefits. If qualified, please send resume to: **Eileen Sullivan, Becton Dickinson, Diagnostic Instrument Systems, 383 Hillen Road, Towson, MD 21204.** An equal opportunity/affirmative action employer.

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# SENIOR RESEARCH SCIENTIST TRANSMEMBRANE TRANSPORT

Committed To  
Scientific  
Excellence

The Department of Drug Delivery at Sterling Research Group, the worldwide pharmaceutical research and development organization of Sterling Drug Inc., located in Great Valley, PA near Philadelphia is conducting research directed towards understanding the factors that limit the transport of drugs, macromolecules and delivery systems across biological membranes and developing approaches to overcome these factors.

The Department is seeking a **SENIOR RESEARCH SCIENTIST** to: Establish and validate *in vitro* methods to study trans-endothelial and trans-epithelial transport and metabolism of drugs, macromolecules and delivery systems; characterize the extracellular and intracellular factors limiting transport; identify cellular and sub-cellular trafficking systems that can be utilized to

facilitate transport; and develop approaches to enhance transport.

Candidates should have a Ph.D. in Biological Sciences (Biochemistry or Cell Biology or Physiology or equivalent) or Pharmaceuticals, with experience in the transport of molecules across epithelial or endothelial membranes. Experience in the isolation and identification of peptides, drugs and their metabolites, transport phenomena, membrane structure and enzyme kinetics are highly desirable.

Sterling Drug Inc. offers competitive salaries and a comprehensive benefits program, along with outstanding career opportunities for personal and professional growth. For confidential consideration, please forward your resume with salary history/requirements and the names of three references to:



Employee Relations—GV41

## STERLING RESEARCH GROUP

A Division of Sterling Drug Inc.

9 Great Valley Parkway  
Malvern, PA 19355

A Subsidiary of  
**EASTMAN KODAK COMPANY**

Equal Opportunity Employer M/F/H/V



## MICROBIOLOGIST/ MOLECULAR BIOLOGIST

Martek Corporation is seeking a PhD level Research Scientist for a senior level position to begin on or after September 1, 1989 at its new laboratory facilities in Columbia, Maryland. Founded in 1985, Martek is a leader in the production of high-value chemicals from microalgae grown in closed photobioreactors.

The successful candidate will possess a strong background in microbiology and a familiarity with recombinant DNA techniques. Previous experience in working with algae is not necessary. Responsibilities will include development and implementation of strain improvement strategies and basic research into future company areas. Technical assistance will be available. Opportunities exist for establishment of an externally funded research program; Martek scientists have been very successful in obtaining external funding, particularly through the Small Business Innovation Research Program.

Martek is located in a highly desirable area midway between Washington DC and Baltimore. The Company offers an attractive benefits program and a salary commensurate with experience. Interested candidates should send a resume to:

**Richard Radmer, President**  
Martek Corporation  
6480 Dobbin Road  
Columbia, MD 21045

**MARTEK CORPORATION**

## RESEARCH SCIENTISTS PROTEIN MODELING

**Amgen** is a leading biotechnology company which discovers and develops human therapeutics utilizing recombinant DNA and molecular biology technology.

The Protein Modeling Group will be responsible for establishing a program to study structure/function relationships of protein therapeutics. The program will include coordinating cooperative projects to determine the crystal structures of proteins and their receptors, modeling the interaction of peptides and their receptors, designing improved peptide analogs and working with other research groups in solving problems related to protein stability, solubility and specificity.

Candidates should have a Ph.D. in Biochemistry, Physical Chemistry or a related discipline. A minimum of three years' postdoctoral experience in computer-based protein modeling and design or in other aspects of protein structure/function is also required.

**Amgen** offers an excellent compensation and benefits package as well as the unique opportunity to contribute to the development of significant new human pharmaceuticals on the cutting edge of biotechnology. If you have the necessary qualifications and would like to be a part of a company that places a high priority on its human resources, please send a c.v., in confidence, to:

**AMGEN, INC.**  
Recruitment, Dept. #407  
1900 Oak Terrace Lane  
Thousand Oaks  
CA 91320

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# AMGEN

## POSITIONS OPEN

**FACULTY POSITIONS IN PHARMACOLOGY.** The Department of Pharmacology and Therapeutics in the Schools of Medicine and Dental Medicine, State University of New York (SUNY) at Buffalo invites applications for two tenure-track assistant professor positions. Candidates should have a Ph.D. in pharmacology or a closely related discipline and 2 years of postdoctoral experience. The applicants will be expected to develop an independent research program, generate extramural funding, and participate enthusiastically in the professional and graduate teaching programs of the Department. Individuals from all sub-disciplines may apply, but those with a primary interest in the study of receptor mechanisms, signal transduction, ion transport, or other aspects of regulation of biological processes at the cellular or molecular level are especially encouraged. Start-up funds are available. Please send, by 1 September 1989, curriculum vitae, the names and addresses of three reference sources, and an outline of future research plans to: **Dr. Ronald P. Rubin, Chairman Designate, Department of Pharmacology and Therapeutics, School of Medicine and Biomedical Sciences, SUNY at Buffalo, 102 Farber Hall, Buffalo, NY 14214.** SUNY-Buffalo is an Affirmative Action/Equal Opportunity Employer.

### HEAD BIOCHEMISTRY DEPARTMENT

Kansas State University, a comprehensive land-grant University, is seeking an established scientist to head the Department of Biochemistry in the College of Arts and Sciences. The Department receives a major portion of its support from the Agricultural Experiment Station. The new Head should have documented excellence and leadership in research, aggressively encourage excellence in research and undergraduate and graduate education, and qualify for appointment as a tenured professor. The Department has several vacant tenure-track positions to be filled by the new head. Currently there are about 25 predoctoral students and 10 postdoctoral associates. Extramural funding approaches \$1 million from NIH, NSF, USDA, The Rockefeller Foundation, and other agencies. The Department has significant teaching and research space in a new Biochemistry/Chemistry building that was completed a year ago. Nominations and applications, the latter including a letter of application, curriculum vitae, a description of present and future research interests, and names of at least three references should be sent to: **Dr. Owen Koeppe, Chair, Search Committee, Department of Biochemistry, Willard Hall, Kansas State University, Manhattan, KS 66506.** The position is available as soon as the selection is made. Review of applications will begin on 1 October 1989.

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

**MOLECULAR PHARMACOLOGY.** Mayo Medical School invites applications for a tenure-track **FACULTY POSITION** in the Department of Pharmacology, available 1 January 1990. Candidate should have primary interests in pharmacology and be pursuing these interests with the methods of molecular biology. Mayo will provide generous space and start-up funds in addition to an attractive package of salary and benefits. Academic rank will be determined by qualifications; established investigators are also encouraged to apply. Submit curriculum vitae with names and addresses of three or more referees to: **Stephen Brimijoin, Ph.D., Department of Pharmacology, Mayo Medical School, Rochester, MN 55905.** An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL FELLOWSHIPS IN IMMUNOBIOLOGY** are available for fall, 1989 to Ph.D.'s or M.D.'s interested in training for careers in academic research. Studies involve inflammatory lymphocyte-endothelial interactions that occur in vivo. Individuals with protein biochemistry or molecular biology expertise are especially encouraged to apply. Independent research projects are strongly supported, but participation is also expected in ongoing NIH-funded research projects involving (i) transplantation immunobiology, (ii) T cell regulation, in vivo and in vitro, and (iii) inflammatory endothelial behavior.

Send curriculum vitae, and a statement of career goals and research interests to: **Charles Orosz, Ph.D., Associate Professor, Department of Surgery, The Ohio State University, 259 Means Hall, 1654 Upham Drive, Columbus, OH 43210.**

## POSITIONS OPEN

### HEAD DEPARTMENT OF FISHERIES AND WILDLIFE COLLEGE OF NATURAL RESOURCES UTAH STATE UNIVERSITY

Desired qualifications: An earned doctorate and record of scholarship in the biology and/or management of terrestrial or aquatic wild animal resources, or related field; a sense of the manifold values that modern society attaches to such resources, and the processes whereby those values are translated into policy; discriminating judgment in the quality of contemporary ecological science; and demonstrated effectiveness in administering teaching, research (including the role of extramural funding), extension, and international programs.

Applications: Please send cover letter, curriculum vitae, and names of four people willing to provide references to: **Frederic H. Wagner, Chair, Search Committee, Department of Fisheries and Wildlife, College of Natural Resources, Utah State University, Logan, UT 84322-5210.** Closing date: 1 October 1989 or until suitable applicant is found. *USU is an Affirmative Action/Equal Opportunity and IRCA Employer.*

### THREE JUNIOR FACULTY POSITIONS CELLULAR AND MOLECULAR PHYSIOLOGY

Applications are solicited for three tenured-track positions at the rank of assistant or associate professor (term appointments) in the Department of Cellular and Molecular Physiology, Yale University School of Medicine. Candidates must hold an M.D., Ph.D., or equivalent degree with experience and interest in cellular and/or molecular physiology. Opportunities are available for both collaborative and independent research for graduate and medical student teaching.

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

**Walter F. Boron, M.D., Ph.D.**  
Chairman, Department of Cellular and  
Molecular Physiology  
333 Cedar Street  
P. O. Box 3333  
New Haven, CT 06510

*Yale University is an Affirmative Action/  
Equal Opportunity Employer.*

### LEADER OF ANIMAL BIOLOGY AND MEDICINE THE UNIVERSITY OF CHICAGO

The University of Chicago is establishing a new academic unit whose primary focus is the study of animal biology and medicine, and is seeking a faculty member with a research background to lead this program. The dual responsibilities of the faculty person will be to lead the development of the new unit and to direct the University's central and satellite animal care facilities. The University is committed to the development of a high-quality animal care system, and is currently upgrading its physical facilities to insure that all animals in our large and diverse colonies receive the best of veterinary medical care. The new faculty person will have the opportunity to continue her/his personal research program and be allocated the resources needed to recruit additional veterinary researchers. This initiative provides a candidate with suitable background in research and administration unusual opportunities for academic and clinical leadership, not only within the University, but throughout the Midwest through shared utilization of our extensive resources.

Applicants should send curriculum vitae to: **Dr. Philip S. Ulinski, Professor and Chairman, Department of Organismal Biology and Anatomy, The University of Chicago, 1025 East 57th Street, Chicago, IL 60637.** *The University of Chicago is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available immediately in New York City area to investigate the cellular and biochemical effects of selenium compounds. Experience in tissue culture assays desirable. Send curriculum vitae and names of three references to: **Dr. Gerald D. Frenkel, Department of Biological Sciences, Rutgers University, 101 Warren Street, Newark, NJ 07102.** *Rutgers University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**ORGANIC/BIOCHEMISTRY:** Position at the **ASSISTANT PROFESSOR** level to teach organic and/or biochemistry beginning September 1989 or January 1990. Initial appointment will be for 1 year with a possible extension for three further years. Opportunities for research in a well-equipped department are available. Postdoctoral experience preferred. Letter of application, complete transcripts, curriculum vitae, outline of research interests, and three letters of recommendation should be sent, by 15 September 1989, to: **Faculty Search Committee, c/o A. R. Morgan, Department of Chemistry, University of Toledo, Toledo, OH 43606.** *An Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL FELLOW

Immunology—Molecular Neurobiology HHMI—San Francisco—University of California, San Francisco (UCSF). A position is available immediately in a laboratory studying tachykinin receptor function, gene structure, and regulation. Applicants should have an M.D./Ph.D. or Ph.D. Experience with recombinant DNA techniques is essential. Send curriculum vitae, statement of interests, and three letters of reference to: **Dr. Donald G. Payan, U-426, University of California, San Francisco, 3rd and Parnassus, San Francisco, CA 94143.**

### POSTDOCTORAL FELLOWSHIP IMMUNOLOGY/MICROBIOLOGY

Fellowship available to study autoimmunity and infection at the University of Oklahoma Health Sciences Center, Oklahoma City. Applicants should have experience in immunology and/or molecular biology. Submit curriculum vitae and names of three references to: **Dr. Madeleine W. Cunningham, Department of Microbiology and Immunology, P.O. Box 26901, University of Oklahoma Health Sciences Center, Oklahoma City, OK 73190.** *An Equal Opportunity Employer.*

**POSTDOCTORAL FELLOWSHIP**—A position is immediately available to study mechanisms of regulation of neuropeptide and protein degradation. The applicant should have a Ph.D. or M.D. degree with biochemical training. Applicants must be U.S. citizens or permanent residents. This fellowship is supported by a training grant from the National Institute of Drug Abuse (NIDA). Salary: NIDA stipend plus supplement. Send curriculum vitae and names of three references to: **Dr. Sherwin Wilk, Department of Pharmacology, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574.** *An Equal Opportunity Employer.*

**POSTDOCTORAL FELLOWSHIPS** available in the areas of: (i) Molecular genetics of connective tissue biogenesis (ii) Molecular mechanisms of human autoimmune disease. Projects include analysis of mutations in connective tissue genes associated with heritable disorders in humans, experimental approaches to gene therapy, immunogenetics of human autoimmune disease, and idiopathic specificity of autoantibodies. Experience with molecular biology techniques preferred. Salary negotiable. Send curriculum vitae and three letters of reference to: **Dr. Richard Wenstrup, Box 3090, Duke University Medical Center, Durham, NC 27710.** *Duke University is an Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available immediately to study cell cycle control [see *PNAS* **85**, 2101 (1988)] and cellular aging [see *J. Bact.* **171**, 37 (1989)] in budding yeast. Current research includes the cloning (*J. Biol. Chem.*, in press) and characterization of genes whose expression in age-related and the isolation of mutants with an altered life span (reproductive capacity). This is a fully-funded position for someone who wishes to broaden their expertise in molecular biology in an excellent research atmosphere. The medical center is located close to the historic French Quarter, and the New Orleans lifestyle is pleasant and affordable. Send a biographical sketch, including a bibliography, a brief summary of past research, and the names, addresses, and telephone numbers of three references to: **Dr. S. Michal Jazwinski, Department of Biochemistry and Molecular Biology, Louisiana State University Medical Center (LSUMC), 1901 Perdido Street, New Orleans, LA 70112.** *LSU is an Equal Opportunity/Affirmative Action Employer.*



# Director of Biological Research

Hoechst-Roussel Pharmaceuticals, Inc., an internationally based pharmaceutical company and world leader in neuroscience research, has an immediate opening for a Director to head its Biological Research Department.

This Department, comprised largely of neuropharmacologists, behavioral pharmacologists, physiologists, biochemists and biochemical pharmacologists, works closely with innovative drug discovery groups in Medicinal Chemistry and a newly formed Molecular Neurobiology Department. Primary emphasis of the group is on the development of methodology relevant to establishing in vivo and in vitro models for the evaluation of drugs to treat Alzheimer's disease, schizophrenia, and affective disorders. Secondary interests include a small, but growing effort in dermatology. Particular focus will be on a strong collaboration with the Molecular Neurobiology Department in the integration of gene technology into the drug discovery process.

Requirements of the position include a Ph.D. in pharmacology, neuropharmacology, biochemistry or a closely related field. The successful candidate will have a significant record of research accomplishments and collaboration in the neuroscience field and a demonstrated ability to direct a large, multi-disciplinary research team. Familiarity with other areas of pharmacology is a plus.

Position is located in our modern research facilities on a 110 acre campus in Bridgewater, New Jersey, convenient to good housing, recreation and educational facilities and offers a comprehensive salary and benefits package.

Please send resume, with salary requirements in confidence to: Nancy Wilkerson, Manager, Human Resources, Building M-303, Department 39, Hoechst-Roussel Pharmaceuticals Inc., Route 202-206, P.O. Box 2500, Somerville, NJ 08876-1258. An Affirmative Action Employer M/F/H/V.

## Hoechst Celanese

**Hoechst** 

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## OPPORTUNITIES IN ALLERGY AND SURGICAL RESEARCH

### Biochemist/Pharmacologist/Immunologist/Physiologist

Alcon Laboratories, Inc., is an international leader in the research, development, manufacturing and marketing of a wide range of ophthalmic products. Due to our tremendous success with a broad, sophisticated product line, we are rapidly approaching the \$1 billion mark in annual sales.

We are looking for individuals with strong credentials in the areas of allergy, inflammation, wound healing and surgical research. The selected individuals should have the desire and ability to develop novel assay technology and be capable of applying this technology to the discovery of new therapeutic agents for ophthalmology.

#### Principal Scientist/Group Leaders

- PhD in Pharmacology, Biochemistry, Physiology, or Immunology
- Experience in allergy, growth factors or collagen biochemistry desired
- 10 years in industry or post-doctoral experience preferred
- Demonstrated ability to collaborate and manage research or drug discovery team

#### Senior Scientists

- PhD in Pharmacology, Biochemistry, Physiology, Immunology or related science
- 1 or more years of industry or post-doctoral experience in inflammation, allergy or wound healing research
- Training/expertise in ocular tissue, growth factors, bioadhesion, corneal perfusion media and/or allergic mechanisms is highly desirable
- Good oral/written communication skills

These positions will offer opportunities for professional growth and recognition within one of the world's most sophisticated ophthalmic research and development laboratories. In addition, we offer a competitive salary, a comprehensive benefits package and a desirable Fort Worth location with recreational, cultural and economic advantages indigenous to the Sunbelt. For immediate and confidential consideration, please send detailed curriculum vitae with salary history and salary requirements to: **Sherry H. Rightmer, Employment Supervisor, Placement & Development, T1-3, Alcon Laboratories, Inc., P.O. Box 6600, Fort Worth, Texas 76115.**

Equal Opportunity Employment • Principals Only, Please

**Alcon**<sup>®</sup>  
LABORATORIES

## POSITIONS OPEN

Harvard Medical School and Children's Hospital, Boston, Massachusetts—**POSTDOCTORAL FELLOW**. Major emphasis is on cell and molecular biology of connective and skeletal tissue, cells and noncollagenous proteins. Candidate should have some experience in isolation and characterization of proteins and genes.

Send résumé to:

**Dr. Melvin J. Glimcher**  
Children's Hospital  
300 Longwood Avenue  
Enders 11  
Boston, MA 02115

**POSTDOCTORAL POSITION** available August 1989 to study nutritional regulation of gene expression in primary pancreatic acinar cell cultures. Experience in nutritional biochemistry or molecular biology preferred. *Women and minorities are encouraged to apply.* Send curriculum vitae and three letters of reference to: **Dr. P. M. Brannon**, Department of Nutrition and Food Science, 309 Shantz, University of Arizona, Tucson, AZ 85721. *Equal Employment Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available immediately to study purine salvage enzymes in parasitic protozoans. Requirements include Ph.D. in biochemistry or related field, and experience in enzyme purification and characterization. Experience in cell culture desirable. Submit curriculum vitae and names of reference by 1 September 1989 to: **Dr. Randolph Berens**, Infectious Diseases (B168), University of Colorado Health Sciences Center, 4200 East 9th Avenue, Denver, CO 80262. *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available to study receptor regulation of phosphoinositide metabolism and protein kinase C activation in vascular smooth muscle primary cultures. A strong background in biochemistry, cell biology, or pharmacology is preferred. Salary negotiable, benefits provided. Applicants should send curriculum vitae plus three letters of reference by 15 September 1989 to: **Dr. R. Dale Brown**, Department of Pharmacology, University of Illinois at Chicago, 835 South Wolcott Avenue, Chicago, IL 60612. *Equal Opportunity/Affirmative Action Employer.*

## POSTDOCTORAL POSITION TUMOR IMMUNOLOGY

Two fellowships are available beginning September 1989. One project involves the characterization and isolation of a tumor facilitating factor which is a glycoprotein produced by B16 melanoma cells. The study will include both the molecular biology and cellular immunology of this glycoprotein. A second project involves the biochemical and cellular immunology of a factor found in the serum of UVB-treated mice that transfers increased susceptibility to the growth of B16 melanoma cells. Send curriculum vitae, a brief statement of research interests, and the names of three references to: **Neil I. Brody, M.D., Ph.D.**, Department of Dermatology, State University of New York Health Science Center at Brooklyn, 450 Clarkson Avenue, Brooklyn, NY 11203.

**POSTDOCTORAL POSITIONS IN MOLECULAR/DEVELOPMENTAL NEUROBIOLOGY** available immediately to study the role of extracellular proteases and their inhibitors in neuronal migration, axon elongation, and synaptogenesis. Studies will examine the action of these proteases on cell-cell and cell-substratum interactions, their cellular localization, and the regulation of protease expression in the developing nervous system. Individuals with experience in molecular biology, in situ hybridization, protein chemistry, extracellular matrix, or proteases are encouraged to apply. Send curriculum vitae, statement of research interests, and the names of three references to: **Dr. N. W. Seeds**, Department of Biochemistry/Genetics, University of Colorado Health Sciences Center, School of Medicine, 4200 East 9th Avenue, B-121, Denver, CO 80262. *The University of Colorado is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available for research in signal transduction mechanisms involved in prostaglandin synthesis in human intrauterine tissues during labor. Emphasis on tyrosine kinase (lipocortins) and protein kinase substrates. Participation in an active NIH-funded perinatal research environment. Ph.D. required, experience in protein chemistry, second messengers or protein phosphorylation desired. Submit curriculum vitae and names of three references to: **Dr. L. Myatt**, Department of OB/GYN, University of Cincinnati College of Medicine, 231 Bethesda Avenue, Cincinnati, OH 45267-0526. *An Equal Opportunity Employer.*

**POSTDOCTORAL POSITION**—available for someone interested in T-cell cloning and/or molecular biology of the T-cell receptor. Forward curriculum vitae to: **Dr. Steve Brostoff**, The Immune Response Corporation, 6455 Nancy Ridge Drive, San Diego, CA 92121. *Equal Opportunity Employer.*

## POSTDOCTORAL POSITION

Applications are invited for postdoctoral scientists to work on a *Drosophila* neurobiology project in the Institute for Molecular Genetics at Baylor College of Medicine, Houston, Texas. Research projects will involve studying essential genes that have been identified with P-element-mediated enhancer detection [PNAS 84, 9123 (1987)] and that are expressed in the peripheral nervous system of embryos or larvae. Candidates should possess a Ph.D. in molecular biology, genetics, or biochemistry and preferably have experience with *Drosophila*. Starting date by arrangement, but preferably before the end of 1989. Send curriculum vitae and three letters of recommendation to: **Hugo Bellen, Ph.D.**, Institute for Molecular Genetics, Baylor College of Medicine, Houston, TX 77030.

**POSTDOCTORAL POSITION** is available immediately for NIH-funded study of the neuromuscular control of the upper esophageal sphincter in dogs. Techniques used include EMG, manometry, quantitative videofluoroscopy, nerve stimulation and recording, and mathematical modeling. Ph.D., with experience in chronic animal preparations, neurophysiology, and computer programming is preferred. Send curriculum vitae and names of three references to: **Dr. Ivan M. Lang**, Surgical Research 151, Zablocki VA Medical Center, Milwaukee, WI 53295. Telephone: 414-384-2000 extension 1603.

## TWO POSTDOCTORAL POSITIONS PLANT BIOLOGY

Available September 1989 or until filled. Interested applicants could work in one of three areas: (i) patch clamp studies of light-activated proton pump in stomatal guard cells; (ii) gas exchange studies of stomatal regulation in selected agricultural crops; (iii) sensory transduction of the blue light response in guard cell protoplasts. Previous experience in the respective fields preferred. Please send curriculum vitae, letter with research interests, and names of three references to:

**Professor Eduardo Zeiger**  
Department of Biology  
University of California, Los Angeles  
Los Angeles, CA 90024-1606

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

**POSTDOCTORAL RESEARCH ASSOCIATE** position available immediately to participate in basic, applied, and clinical pharmacology studies of investigational anticancer drugs. Present studies involve morpholinyl anthracyclines, novel platinum analogs, Liblomycin and a variety of Phase I/II agents. Other projects include thermochemotherapy and subcellular localization of drugs by analytical electron microscopy. Outstanding opportunity to work with a diversified collaborative group. Reply with curriculum vitae and two letters of reference to: **Dr. Robert A. Newman**, Section of Pharmacology, Department of Medical Oncology, Box 52, University of Texas M. D. Anderson Cancer Center, 1515 Holcombe Boulevard, Houston, TX 77030.

*Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**POSTDOCTORAL POSITION** for an individual to work on focused project investigating stress proteins in autoimmunity. Clinical training for board qualification in rheumatology is optional. Candidates should have experience in cellular/molecular immunology. Salary in the \$25,000 to \$30,000 range. Respond immediately with curriculum vitae and names of three references to: **Dr. John Winfield**, Division of Rheumatology and Immunology, University of North Carolina—Chapel Hill, CB#7280, Chapel Hill, NC 27599. *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL/RESEARCH ASSOCIATE** position available immediately for a Ph.D. with a strong background in thermoregulation. The laboratory has a long-standing grant-supported program involving the study of actions of drugs of abuse on thermoregulation, analgesia, pupillary size, and cerebral excitability in rats. Only a minimal background in pharmacological research is required. The individual will join an active group of faculty and pre- and postdoctoral fellows involved with research on drugs of abuse and neuropeptides. Please send curriculum vitae and names of three references to: **Dr. Martin W. Adler**, Department of Pharmacology, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, PA 19140. *An Equal Opportunity Employer M/F/V/H.*

**POSTDOCTORAL RESEARCH FELLOW-SHIP** (NIH-supported) position immediately available to study the role of lipid mediators (platelet-activating factor, leukotrienes, prostaglandins, and glycerolipid derivatives) and protein kinases in the function of leukocytes at the biochemical and molecular level. Send curriculum vitae (two letters of recommendation are optional) to: **Joseph T. O'Flaherty**, Professor of Medicine, Wake Forest University Medical Center, Winston-Salem, NC 27103. *Affirmative Action/Equal Opportunity Employer.*

## RICE UNIVERSITY POSTDOCTORAL RESEARCH POSITION

For studies of regulation of sterol synthesis. Experience in metabolism and/or chemical synthesis of sterols and bile acids desirable. Salary dependent on qualifications and experience. Send résumé with names of references to: **G. J. Schroepfer, Jr.**, Department of Biochemistry and Cell Biology, Rice University, P.O. Box 1892, Houston, TX 77251. *Rice University is an Equal Opportunity/Affirmative Action Employer.*

**RESEARCH ASSISTANT PROFESSOR**—To join group interested in control of leukemic cellular proliferation and differentiation and to participate in ongoing studies of protein kinase biochemistry, focusing upon newly identified and purified enzyme and substrates. Scope of work includes basic biochemical immunologic and cellular characterization; and cloning, expression, sequencing and other molecular approaches. Ph.D., and background in protein biochemistry and/or cloning methodology required. Reply with curriculum vitae and references to: **Dr. Robert G. Strickland, M.D.**, Chairman, Department of Medicine, University of New Mexico School of Medicine, 2211 Lomas NE, Albuquerque, NM 87131.

## RESEARCH ASSISTANT PROFESSOR HEAD AND NECK TUMOR MOLECULAR BIOLOGY

Washington University Medical Center Department of Otolaryngology-Head and Neck Surgery is seeking Ph.D.-level molecular biologist (research assistant professor, initially non-tenured) to establish oncogene research in head and neck oncology. Responsibilities include establishment and equipping of the laboratory to probe head and neck tumor tissue for oncogene expression, as well as skill and knowledge in flow cytometry.

Requirements: Ph.D. in molecular biology and at least 2 years of experience in oncogene work. Experience in writing grant applications or current grant funding is essential, as the successful applicant in collaboration with the clinical faculty must seek and acquire funding within 2 to 3 years of appointment. Send curriculum vitae and references to: **Dr. Bruce Haughey**, Department of Otolaryngology-Head and Neck Surgery, 4910 Forest Park, Suite 212, St. Louis, MO 63108. *An Equal Employment Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**POSTDOCTORAL POSITION**, fish behavior, to collaborate in research on alarm signaling, including alarm pheromones. Salary: CDN\$23,500 per year, possible renewal for second year. Starting fall/winter, 1989. Send résumé and the names and addresses of three referees to: **R. J. F. Smith, Biology Department, University of Saskatchewan, Saskatoon, Saskatchewan, Canada, S7N 0W0. Telephone: 306-966-4400, Fax: 306-966-4461, Bitnet SMITHR@SASK.Sask.CA.**

**POSTDOCTORAL RESEARCH ASSOCIATE**—Position is available for an appropriate individual to join ongoing research on cloning, gene sequencing, expression and regulation of connective tissue lysyl oxidase. Experience in molecular biology is required, familiarity with protein chemistry helpful. Forward curriculum vitae and the names of three references to: **Herbert M. Kagan, Ph.D., Department of Biochemistry, Boston University School of Medicine, Boston, MA 02118. Equal Opportunity Employer/Affirmative Action.**

### POSTDOCTORAL RESEARCH ASSOCIATE MOLECULAR GENETICS

Position available immediately to study DNA rearrangement or DNA methylation in the ciliate *Tetrahymena*. Experience in recombinant DNA technology required. Send curriculum vitae and names of two references with telephone numbers to: **Dr. Kathleen Karrer, Department of Biology, Marquette University, Milwaukee, WI 53233.**

**RESEARCH ASSISTANT PROFESSOR** to study mechanism of action of hormones, steroids and drugs of abuse; metabolic pathway in the brain; teach graduate students. Salary is \$42,000 yearly for 40-hour week; Monday through Friday 9:00 a.m. to 5:00 p.m. Applicants with Ph.D. in pharmacology and 2 years of experience. Send résumés only to: **Job Service of Florida, 701 S.W. 27th Avenue, Room 15, Miami, FL 33135. Ref. Job Order #0130977.**

**RESEARCH ASSOCIATE, INORGANIC-ANALYTICAL CHEMISTRY:** Synthesis of air-sensitive metal complexes containing various metal ions with organic nitrogen heterocyclic ligands under dry, air sensitive, and inert atmospheric conditions. Synthesis of organic nitrogen heterocycles such as substituted bipyridines and phenanthrolines. Purification of the compounds by gel, ionic, and reverse-phase chromatographic methods such as HPLC. Study of these transition metal complexes by various electrochemical methods by voltammetry, potentiometry, thin-layer spectroelectrochemical (rapid scan spectroelectrochemical) methods. Analysis of the electro products by various spectroscopic techniques such as NMR, ESR, UV-VIS, mass spectrometry. Analyze data by use of microcomputer and report results. Requires Ph.D. degree in chemistry (organic). Also requires 3 years of experience in the job to be performed. Experience to include use of: NMR, ESR, UV-VIS, HPLC, voltammetry, potentiometry, thin-layer spectroelectrochemistry. Hours: 8:00 a.m. to 5:00 p.m.; 40 hours per week at \$26,659 per year salary. This is a University Position. Please send résumé to: **Illinois Department of Employment Security, 401 South State Street—3 South, Chicago, IL 60605, Attention: Robert S. Felton, Reference # V-IL 9325-F. An employer paid ad.**

**RESEARCH POSITION** available for Ph.D. or M.D. with strong background in molecular neurobiology to study neuronal gene expression. Experience with subtractive cDNA cloning and sequencing, animals, tissue culture, gene transfection and expression required. Knowledge in immunoassays and computer analysis desired. Salary: \$25,000. Send curriculum vitae with references to: **Eugene Lai, M.D., Ph.D., Department of Neurology, Baylor College of Medicine, Houston, TX 77030.**

**RESEARCH SCIENTIST.** Position available for a research scientist in the Rheumatology and Immunology Division of Winthrop-University Hospital. The successful candidate will have a Ph.D. and at least 2 years of postdoctoral experience. Research interests of the division include the role of extracellular matrix and adhesive proteins in inflammation. Send curriculum vitae to: **John F. Aloia, M. D., Chairman, Department of Medicine, Winthrop-University Hospital, 259 First Street, Mineola, NY 11501.**



## ANALYTICAL ELECTRON MICROSCOPY

The sophisticated R&D projects conducted at our state-of-the-art Research Center in Richmond, Virginia are major contributors to Philip Morris U.S.A.'s continued status as one of the world's largest and most successful tobacco product manufacturers. Become a contributing member of our multi-disciplinary team of scientists, and become involved in developing research techniques for a diversity of projects.

Specifically, you will provide interactive problem-solving support to R&D groups in the areas of Light and Electron Microscopy, with emphasis on x-ray microanalysis and correlative structure.

This position requires a Ph.D. in Chemistry, Physics or Materials Science, or the equivalent, with at least 5 to 7 years experience in an Analytical Electron Microscopy Laboratory. Required technical skills include hands-on ability to prepare and process samples, to operate and maintain light and electron microscopes (SEM, TEM) and auxiliary x-ray spectrometers, as well as a thorough working knowledge of dark room procedures. Additional skills include the ability to use image analysis equipment, computers and their software, statistical analysis, and skills in instrumentation. This position requires excellent written and oral communication skills.

We offer a competitive salary and comprehensive benefits, including relocation assistance to the historic and attractive Richmond area. Send your resume to: **Gil Gilbride, Dept. #4889, PHILIP MORRIS U.S.A., P.O. Box 26603, Richmond, VA 23261.**

Philip Morris U.S.A. is an Equal Opportunity/Affirmative Action Employer and encourages minority and female applicants to apply.

Philip Morris U.S.A.

## Ph.D Research Chemists

Monsanto Agricultural Company, a recognized world leader in innovative agricultural research, has immediate openings in our Biorational Design Section for highly motivated, creative professionals with strong problem solving skills and the desire to work in a multidisciplinary team environment at the leading edge of herbicide discovery.

### Enzymologist/Biochemist

This successful candidate will play a key role in our research team by providing new enzyme mechanism and substrate binding information to dramatically impact successful inhibitor design strategies. A Ph.D. in mechanistic enzymology, bioorganic chemistry, or physical biochemistry is required with experience in protein purification, enzyme kinetics or the application of novel biochemical NMR methods. One or more years of post-doctoral experience preferred.

### Synthetic Organic Chemist

The successful candidate will design and synthesize novel enzyme inhibitors which disrupt key biosynthetic processes unique to plants. Good technical writing and interpersonal skills are required. Close interaction with enzymologists, plant physiologists, and molecular modelers is essential. A Ph.D. in synthetic organic chemistry or medicinal chemistry is required along with a background in biochemistry. One or more years of post-doctoral experience is preferred.

These positions offer opportunity for growth and development through a variety of multidisciplinary interactions. We offer a highly competitive salary and benefits package. For immediate and confidential consideration, please send your resume to: **Marion K. Kent, Human Resources - 03H, MONSANTO COMPANY, 800 N. Lindbergh Blvd., St. Louis, MO 63167 or call (314) 694-4890. Monsanto is an Equal Opportunity Employer M/F/H/V.**

Careers for people with ideas

# Monsanto

## POSITIONS OPEN

**RESEARCH ASSOCIATE** needed to participate in independent and team research in the study of the application of digitized video microscopy to problems in biomedical science. Current applications include ratio imaging, fluorescence polarization, resonance energy transfer, video fluorescence recovery after photobleaching (FRAP), clinical diagnostics, and instrumentation and computer hardware and software development. Ph.D. with background in computer science, biophysics, astronomy or mathematics required. Practical experience in computer software development (UNIX, Fortran, FORTH), mathematical modeling, digital and analog circuit design and computer troubleshooting helpful. Salary will be commensurate with experience. Send curriculum vitae and names, addresses, and telephone numbers of three references to: **Dr. Brian Herman, Department of Cell Biology and Anatomy, School of Medicine, CB#7090, 232A Swing Building, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-7090** by 18 September 1989. *An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

**RESEARCH ASSOCIATE** position available as a Biological Scientist III to investigate theoretical (evolutionary biology, ecology) and applied (fisheries biology) molecular population genetics of marine vertebrates and invertebrates. Experience in techniques of obtaining, and analysis of, mitochondrial or single-copy DNA restriction fragment patterns is required. Knowledge of DNA cloning and sequencing techniques and proven publication ability is highly desirable. Position is available at a multidisciplinary research facility with a state-of-the-art molecular genetics laboratory. Requires: a bachelor's degree with a major in one of the biological sciences and 2 years of professional biological experience in a field or laboratory program; or a master's degree in one of the biological sciences and 1 year of professional experience as described; or a doctorate in one of the biological sciences. Salary range: \$23,749.20 to \$39,732.48 per annum. We request that applicants send curriculum vitae, transcripts if graduated within the past 3 years, recent publications, and three references by 1 September 1989 to: **Personnel Office, Florida Marine Research Institute, 100 Eighth Avenue, S.E., St. Petersburg, FL 33701.** *Applicants claiming veteran's preference must submit documentation at the time of application. Equal Employment Opportunity/Affirmative Action.*

**RESEARCH ASSOCIATE, BIO-INORGANIC CHEMISTRY:** Chemical research in the area of protein function and long-range electron transfer reactions in chemically-modified and mutant proteins using the following procedures: purify proteins by isolation from appropriate organism; chemically modify proteins; monitor process by UV-visible and CD spectroscopy, isoelectric focusing, HPLC, and gel filtration. Conduct chemical experiments on purified protein such as: chemical kinetic measurements using computer-controlled flash techniques (exposing protein to light); oxidation potential (voltage); resonance Raman; IR, NMR, and ESR studies. Conduct research reading relevant scientific literature. Requires Ph.D. degree in chemistry, inorganic/bio-inorganic. Also requires 1 year of experience in the job to be performed or 1 year of experience as a research assistant, bio-inorganic chemistry. Experience to include: Isolation and purification of proteins; chemical kinetics; synthesis of metalloporphyrins; spectroelectrochemistry and cyclic voltammetry; resonance Raman, NMR, and CD spectroscopy (experience can be during education). Hours: 9:00 a.m. to 5:00 p.m., 40 hours per week at \$2068.15 per month salary. This is a University position. Please send résumé to: **Illinois Department of Employment Security, 401 South State Street-3 South, Chicago, IL 60605.** Attention: **Connie M. Evans, Reference # V-IL-9119-E.** An Employer-Paid Ad.

**RESPIRATORY OR CARDIOVASCULAR PHYSIOLOGIST** position open at Lovelace Medical Foundation. Full-time with no teaching or committee work required. Technical facilities include NMR, Doppler blood flow, and O<sub>2</sub> transport laboratories. Applications with research interest in any area of cardiopulmonary physiology will be considered. Forward curriculum vitae and statement of research interest to: **Stephen C. Wood, Ph.D., Oxygen Transport Program, Lovelace Medical Foundation, 2425 Ridgcrest Drive SE, Albuquerque, NM 87108.**

## POSITIONS OPEN

### SCIENTIST

Difco Laboratories, a world leader in microbiology products, has a position for a creative, result-oriented scientist, with fundamental training in microbiology. Candidates should have a Ph.D. with hands-on experience in immunoassay or other binding assays. The successful candidate will lead project(s) relating to the development of new diagnostic/quality control tests in microbiology. Reply to: **D. S. Kerschbaum, Difco R&D Center, 1180 Ellsworth Road, Ann Arbor, MI 48108.** *Equal Opportunity Employer, M/F.*

### TECHNICAL ASSISTANT MOLECULAR BIOLOGY M.S./B.S.

Westvaco Forest Research seeks a highly motivated individual to carry out experiments in RFLP analysis and genetic transformation of forest trees.

Primary duties will be to perform laboratory experiments with additional responsibility for the day-to-day management of laboratory supplies and equipment. Responsibility for experimental design and data analysis is involved and will increase as experience is gained.

The successful candidate will have an M.S. in molecular biology, biochemistry, microbiology or a related field, or a B.S. with at least 2 years of experience in molecular biology.

Westvaco offers a competitive salary and benefits package.

Submit curriculum vitae and three references by 1 September 1989 to: **Mr. T. C. Bush, Westvaco Corporation, P.O. Box 1950, Summerville, SC 29484.**

*Equal Opportunity Employer M/F.*

### VISITING ASSISTANT PROFESSOR BIOCHEMISTRY NORTH CAROLINA STATE UNIVERSITY

Excellent opportunity for teaching and collaborative research in expanding Biochemistry Department at North Carolina State University. Nontenure-track position for recent Ph.D., postdoctoral fellow, or visiting professor on leave, starting January 1990. Duties include teaching no more than three biochemistry courses at advanced undergraduate/graduate level during the 9- to 12-month appointment, with possible extension of appointment into second year. Salary is commensurate with experience and includes fringe benefits. Salaries are very competitive; collaborative research opportunities exist in macromolecular biochemistry, molecular biology, and biophysics. Send curriculum vitae and three letters of reference by 16 September 1989, to: **Dr. Paul F. Agris, Head, Department of Biochemistry, North Carolina State University, Box 7622, Raleigh, NC 27695-7622.** *NCSU is an Affirmative Action/Equal Opportunity Employer.*

## FELLOWSHIPS

### JOINT INSTITUTE FOR LABORATORY ASTROPHYSICS (JILA)

JILA [operated jointly by the U.S. National Institute of Standards and Technology (formerly the National Bureau of Standards) and the University of Colorado] is devoted to research study, and teaching in atomic and molecular physics, chemical physics, laser physics, astrophysics, precision measurements, geophysical measurement, and related areas. Applications are invited for two programs:

1. **RESEARCH ASSOCIATESHIPS** for advanced research by recent Ph.D.'s. Applications are accepted and considered anytime throughout the year.

2. **VISITING FELLOWSHIPS** for advanced research by senior scientists. Deadline for completed applications is 1 November 1989. (Please note: the deadline date is changed from that of previous years!)

Further information can be obtained from: **The Secretary, Visiting Scientists Program, JILA, Box 440, University of Colorado, Boulder, CO 80309-0440**

*The University of Colorado at Boulder has a strong institutional commitment to the principle of diversity. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including women, members of ethnic minorities, and disabled individuals.*

## POSITIONS OPEN

### TECHNICAL SALES SPECIALIST

Scientific instrument company in New Jersey is seeking an individual with B.S. in biochemistry. Strong customer interaction in product development and training. Experienced in biomedical applications. Knowledge of fluorescence spectroscopy, circular dichroism, cation measurement systems desired. Travel 30%. Send résumé with salary desired: **Personnel, Instruments SA, Inc., 6 Olsen Avenue, Edison, NJ 08820-2419.** *Equal Opportunity Employer.*

**TENURE-TRACK POSITION OF SENIOR LECTURER** in plant physiology with emphasis on plant molecular biology and tissue culture. Available as from academic year commencing October, 1990. Bar-Ilan is a university which combines graduate and post-graduate academic studies with a foundation in Traditional Judaic studies. Applications including curriculum vitae and three recommendations from scientists, should be sent by September, 1989, to: **Dr. Y. Nitzan, Head, Department of Life Sciences, Bar-Ilan University, Ramat-Gan 52900, Israel.**

## AWARDS

### AMERICAN EPILEPSY SOCIETY AWARDS PROGRAM

The American Epilepsy Society announces a new annual Awards Program designed to encourage and reward clinical and basic science investigators whose research contributes importantly to understanding and conquering childhood-onset epilepsy.

**Category 1 Awards:** Two Annual Awards of \$150,000 each will be made to senior individuals who have a distinguished history of research achievements and professional excellence related to pediatric aspects of epilepsy. One award will go to a clinical investigator and the other to a basic scientist.

**Category 2 Awards:** Three Annual Awards of \$50,000 each will be made to individuals whose research holds promise of leading to important advances in the understanding, diagnosis and treatment of childhood-onset seizures and epilepsy. At least one award in this category will go to a clinical investigator.

Candidates for the American Epilepsy Society Awards are nominated by their peers. The American Epilepsy Society has the sole responsibility for selection of recipients. Nomination forms are available from the American Epilepsy Society. Deadline for completed nominations is 1 October 1989. Awards will be announced at the annual meeting of the American Epilepsy Society in Boston, 2 to 7 December 1989.

Contact: **The American Epilepsy Society Awards Program, AES Executive Office, 179 Allyn Street, Suite 304, Hartford, CT 06103-1488.** Telephone: 203-246-6566.

The American Epilepsy Society Awards Program has been made possible by funds generously provided by the Milken Family Medical Foundation.

## MARKETPLACE

### ANTI-VIRAL DRUG TESTING FOR HIV

**Pan-Data Systems, Inc. (PDS)** offers assistance in drug testing using freshly isolated monocyte/macrophage cultures and PHA-stimulated leukocytes.

Contact **Dr. John Dahlberg, Director of Research**, for more information:  
13 Taft Ct. Rockville MD 20850  
(301) 294-2297/fax (301) 294-8095  
(800) 543-6059

### Custom DNA Purified and Delivered in 48 hours.

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

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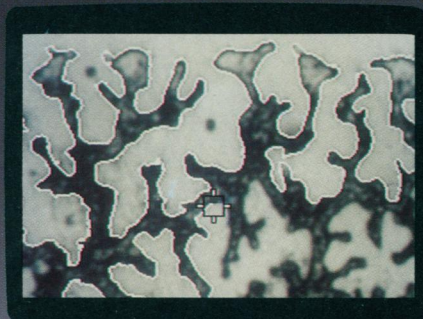
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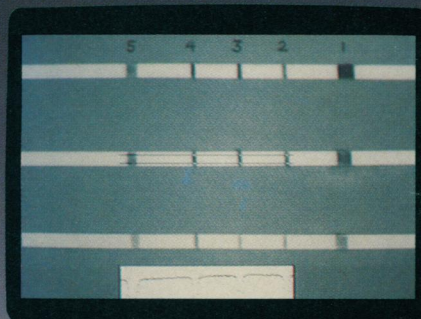
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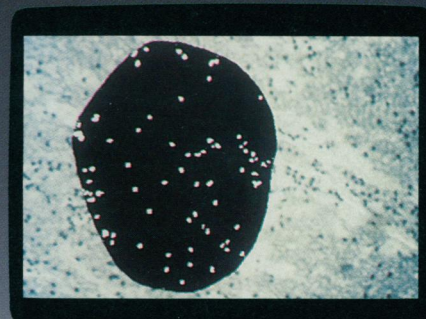
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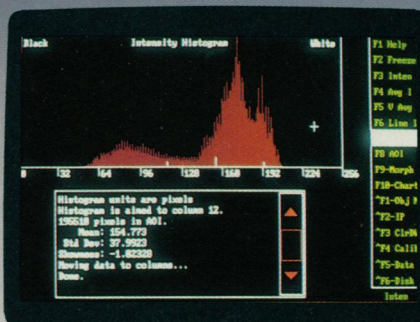
Density along a strip



Automatic object counting

Insert				Inc. Chart
1	2	3	4	F1 Help
1	4.47528	4.11594	3.55845	F2 Show Data
2	6.95985	4.45535	4.89487	F3 Show Data
3	6.95985	4.45535	4.89487	F4 Go to
4	7.88181	4.45535	4.89487	F5 Col Title
5	7.88181	4.45535	4.89487	F6 Stats
6	7.88181	4.45535	4.89487	F7 t-test
7	7.88181	4.45535	4.89487	F8 Lin Reg
8	7.88181	4.45535	4.89487	F9 Clear All
9	7.88181	4.45535	4.89487	F10 Clear Col
10	7.88181	4.45535	4.89487	F11 Clear Row
11	7.88181	4.45535	4.89487	F12 Copy All
12	7.88181	4.45535	4.89487	F13 Copy Col
13	7.88181	4.45535	4.89487	F14 Copy Row
14	7.88181	4.45535	4.89487	F15 Plot Data
15	7.88181	4.45535	4.89487	F16 Transform
X	Y	Distance	Area	Angle
cm	cm	microns	microns	degrees

16k x 64k data worksheet



Intensity histogram

Insert				Inc. Chart
1	2	3	4	F1 Help
1	4.47528	4.11594	3.55845	F2 Show Data
2	6.95985	4.45535	4.89487	F3 Show Data
3	6.95985	4.45535	4.89487	F4 Go to
4	7.88181	4.45535	4.89487	F5 Col Title
5	7.88181	4.45535	4.89487	F6 Stats
6	7.88181	4.45535	4.89487	F7 t-test
7	7.88181	4.45535	4.89487	F8 Lin Reg
8	7.88181	4.45535	4.89487	F9 Clear All
9	7.88181	4.45535	4.89487	F10 Clear Col
10	7.88181	4.45535	4.89487	F11 Clear Row
11	7.88181	4.45535	4.89487	F12 Copy All
12	7.88181	4.45535	4.89487	F13 Copy Col
13	7.88181	4.45535	4.89487	F14 Copy Row
14	7.88181	4.45535	4.89487	F15 Plot Data
15	7.88181	4.45535	4.89487	F16 Transform
X	Y	Distance	Area	Angle
cm	cm	microns	microns	degrees

User defined transformations

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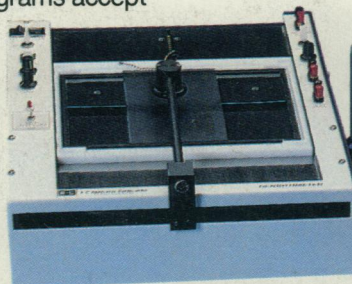
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