

biotheres, Ameridelphia, and various Mesozoic marsupials are not equal sisters in an unresolved multiple split. I am thus still reluctant to accept Szalay's other term, Australidelphia (for microbiotheres plus Eometatheria), as an antonym for Ameridelphia. Within ameridelphians, I see a case for recognition of a fourfold split into Sparassodonta (=Borhyaenimorphia), sparassocynids, didelphids, and a diverse caenolestid-like group that is often called Paucituberculata. Within the Eometatheria, Dasyuromorphia are the sister-group of all other cometatherians. Within the latter, *Notoryctes typhlops*, sole present member of the taxonomically lofty Notoryctemorphia, may be the sister-group of what is usually called Syndactyla. Together, Notoryctemorphia and Syndactyla would then form an unnamed cometatherian taxon, but the evidence is weak. Until it is stronger, perhaps we should waffle and simply consider *N. typhlops* as Syndactyla, *incertae sedis*. Undoubted Syndactyla divide into Paramelomorphia (bandicoots) and Diprotodontia. The latter split into Vombatiformes (wombat-like animals) and Phalangerida (=Phalangeriformes; possums and allies). The Vombatiformes resubdivide into koala-like Phascolarctomorphia and wombat-like Vombatomorpha and the Phalangerida break up into perhaps 11 families, of which several are new. However, in such a scheme a number of Cretaceous and Paleocene fossil groups are left dangling, *incertae sedis*. Moreover, even more fossil marsupials discovered since the book went to press (for example, the Yalkaparidontia, a whole order for *Yalkaparidon coheni*) are already beginning to require changes in the various classifications put forth in it. Temporal calibration of the marsupial fossil record is also undergoing growing pains.

*Possums and Opossums* is a handsome and exciting pair of volumes. It ends with a useful index and is very well illustrated, including several memorable color photographs by Debbie Andrew and Tim Flannery. Interest is added by Peter Murray's colored reconstructions of what various fossil taxa might have looked like.

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## Books Received

**Better Scientific and Technical Writing.** Morris I. Bolsky. Prentice Hall, Englewood Cliffs, NJ, 1988. 195 pp. Paper, \$14.95.

**Bioinorganic Chemistry.** P. Aisen *et al.* Springer-Verlag, New York, 1988. vi, 194 pp., illus. \$79.50. Structure and Bonding, vol. 70.

**Black Mischief.** Language, Life, Logic, Luck. David

Berlinski. 2nd ed. Harcourt Brace Jovanovich, New York, 1988. xvi, 353 pp. Paper, \$17.95.

**Bone Marrow Transplantation.** Current Controversies. Robert Peter Gale and Richard E. Champlin, Eds. Liss, New York, 1988. xxviii, 700 pp., illus. \$135. UCLA Symposia on Molecular and Cellular Biology, vol. 91. From a symposium, Tamarron, CO, March 1988.

**Calcium Antagonists and Microcirculation.** M. Steinhilber, Ed. Karger, Basel, 1988. viii, 120 pp., illus. Paper, \$44.75. Progress in Applied Microcirculation, vol. 14. From a symposium, Tokyo, Japan, July 1987.

**Chemical and Structural Aspects of High Temperature Superconductors.** C. N. R. Rao, Ed. World Scientific, Teaneck, NJ, 1988. x, 235 pp., illus. \$45; paper, \$27. Progress in High Temperature Superconductivity, vol. 7.

**Eicosanoids, Apolipoproteins, Lipoprotein Particles, and Atherosclerosis.** Claude L. Malmendier and Peter Alaupovic, Eds. Plenum, New York, 1988. x, 362 pp., illus. \$75. Advances in Experimental Medicine and Biology, vol. 243. From a colloquium, Brussels, Belgium, March 1988.

**Electroanalytical Techniques in Clinical Chemistry and Laboratory Medicine.** Joseph Wang, VCH, New York, 1988. x, 177 pp., illus. \$45.

**Electrochemical Detection Techniques in the Applied Biosciences.** Vol. 2, Fermentation and Bioprocess Control, Hygiene and Environmental Sciences. Guy-Alain Junter, Ed. Horwood, Chichester, U.K., and Halsted (Wiley), New York, 1988. 196 pp., illus. \$79.95. Ellis Horwood Series in Biochemistry and Biotechnology.

**The Emerging Religion of Science.** Richard C. Rothschild. Praeger (Greenwood), Westport, CT, 1989. xii, 164 pp. \$34.95.

**Encounters with Biomedicine.** Case Studies in Medical Anthropology. Hans A. Baer, Ed. Gordon and Breach, New York, 1987. xxiv, 349 pp. \$89. Health, Society and Culture, vol. 1.

**Formal Methods in Artificial Intelligence.** Allan Ramsay. Cambridge University Press, New York, 1988. x, 279 pp., illus. \$49.50. Cambridge Texts in Theoretical Computer Science, vol. 6.

**Immune Dysfunctions in Cancer and AIDS.** Herbert E. Nieburgs and J. George Bekesi, Eds. Liss, New York, 1988. xxii, 681 pp., illus. \$195. From a symposium, Nice, France, April 1987.

**The Influence of Organometallic Chemistry on Organic Synthesis.** Present and Future. M. L. H. Green and S. G. Davies, Eds. Royal Society, London, 1988. viii, 151 pp., illus. £31.95. Reprinted from *Philosophical Transactions of the Royal Society A*, vol. 326. From a meeting, London, U.K., Feb. 1988.

**Introduction to Aroma Research.** Manfred Rothe. Kluwer, Norwell, MA, 1988. viii, 138 pp., illus. \$89. Handbook of Aroma Research. Translated from the German edition.

**Introduction to Nonequilibrium Statistical Mechanics.** James A. McLennan. Prentice Hall, Englewood Cliffs, NJ, 1989. xii, 372 pp. \$46. Prentice Hall Advanced Reference Series.

**Introduction to Nonlinear Laser Spectroscopy.** Marc D. Levenson and Satoru S. Kano. 2nd ed. Academic Press, San Diego, CA, 1988. xvi, 299 pp., illus. \$39.50. Quantum Electronics.

**The Nonprofit Economy.** Burton A. Weisbrod. Harvard University Press, Cambridge, MA, 1988. xiv, 251 pp. \$22.95.

**Nutrition, Aging, and the Elderly.** Hamish N. Munro and Darla E. Danford, Eds. Plenum, New York, 1989. xviii, 395 pp., illus. \$69.50. Human Nutrition, vol. 6.

**Nutrition and Cancer Prevention.** Investigating the Role of Micronutrients. Thomas E. Moon and Marc S. Micozzi, Eds. Dekker, New York, 1989. xvi, 588 pp. \$149.75.

**Optical Fiber Telecommunications II.** Steward E. Miller and Ivan P. Kaminow, Eds. Academic Press, San Diego, CA, 1988. xx, 995 pp., illus. \$59.50.

**Organic Luminescent Materials.** B. M. Krasovskii and B. M. Bolotin. VCH, New York, 1988. xii, 340 pp., illus. \$28. Translated from the Russian edition (1984) by V. G. Vopian.

**Organizational Science Abroad.** Constraints and Perspectives. Chimezie A. B. Osiagweh, Yg. Plenum, New York, 1989. xxiv, 340 pp. \$35.

**Particles on Surfaces 1.** Detection, Adhesion, and Removal. K. L. Mittal, Ed. Plenum, New York, 1988. x, 384 pp., illus. \$82.50. From a Symposium, San Francisco, CA, 1986.

**Path Integral Methods in Quantum Field Theory.** R. J. Rivers. Cambridge University Press, NY, 1988. xii, 339 pp., illus. Paper, \$24.95. Cambridge Monographs on Mathematical Physics. Reprint, 1987 ed.

**Processing Structures for Perception and Action.** Final Report of the Sonderforschungsbereich "Kybernetik" 1969-1983. Hans Marko, Gert Hauske, and Albrecht Struppler, Eds. VCH, New York, 1988. xviii, 278 pp., illus. \$69.50.

**Properties of Impurity States in Superlattice Semiconductors.** C. Y. Fong, Inder P. Batra, and S. Ciraci, Eds. Plenum, New York, 1988. xiv, 351 pp., illus. \$79.50. NATO Advanced Science Institutes Series B, vol. 183. From a workshop, Colchester, U.K., Sept. 1987.

**Relationships and Mechanisms in the Periodic Table.** D. J. Clouthier *et al.* Springer-Verlag, New York, 1989. x, 282 pp., illus. \$89.50. Topics in Current Chemistry, vol. 150.

**Relativistic Effects in Atoms and Molecules.** Stephen Wilson, Ed. Plenum, New York, 1988. xiv, 291 pp. + floppy disk in pocket. \$55. Methods in Computational Chemistry, vol. 2.

**Revolutions in Science.** Their Meaning and Relevance. William R. Shea, Ed. Science History Publications, Canton, MA, 1989. xii, 291 pp., illus. \$45. From a conference, Coimbra, Portugal, April 1988.

**The Science of Photobiology.** Kendrick C. Smith, Ed. 2nd ed. Plenum, New York, 1989. viii, 426 pp., illus. \$59.50.

**A Second Course in Linear Algebra.** William C. Brown. Wiley-Interscience, New York, 1988. xii, 264 pp. \$34.95.

**Sedimentologic Consequences of Convulsive Geologic Events.** H. Edward Clifton, Ed. Geological Society of America, Boulder, CO, 1988. vi, 157 pp., illus. Paper, \$25. GSA Special Paper no. 229. Based on a symposium, Orlando, FL, Oct. 1985.

**Seed Moisture.** Phillip C. Stanwood and Miller B. McDonald, Eds. Crop Science Society of America, Madison, WI, 1989. xviii, 115 pp., illus. Paper, \$18. CSSA Special Publication no. 14.

**Self-Understanding in Childhood and Adolescence.** William Damon and Daniel Hart. Cambridge University Press, New York, 1988. xii, 205 pp. \$29.95. Cambridge Studies in Social and Emotional Development.

**Semiconductor Silicon Crystal Technology.** Fumio Shimura. Academic Press, San Diego, CA, 1988. viii, 426 pp., illus. \$49.95.

**Skin Tumors.** Experimental and Clinical Aspects. Claudio J. Conti, Thomas J. Slaga, and Andres J. P. Klein-Szanto, Eds. Raven, New York, 1988. xiv, 393 pp., illus. \$98. Carcinogenesis, vol. 11.

**Squeezed and Nonclassical Light.** P. Tombesi and E. R. Pike, Eds. Plenum, New York, 1989. x, 335 pp., illus. \$75. NATO Advanced Science Institutes Series B, vol. 190. From a workshop, Cortina d'Ampezzo, Italy, Jan. 1988.

**Statistical Spectral Analysis.** A Nonprobabilistic Theory. William A. Gardner. Prentice Hall, Englewood Cliffs, NJ, 1988. xxvi, 566 pp., illus. \$57. Prentice Hall Information and System Sciences Series.

**Stereochemical Application of Gas-Phase Electron Diffraction.** István Hargittai and Magdolna Hargittai, Eds. VCH, New York, 1988. 2 vols. Part A, The Electron Diffraction Technique. xviii, 563 pp., illus. Part B, Structural Information for Selected Classes of Compounds. xviii, 511 pp., illus. Each vol., \$100; the set, \$180. Methods in Stereochemical Analysis, vol. 10.

**Sterol Biosynthesis Inhibitors.** Pharmaceutical and Agrochemical Aspects. D. Berg and M. Plempel, Eds. Horwood, Chichester, U.K., and VCH, New York, 1988. 583 pp., illus. \$155. Ellis Horwood Series in Biomedicine.

**Tissue Engineering.** Richard Skalak and C. Fred Fox, Eds. Liss, New York, 1988. xxii, 343 pp., illus. \$60. UCLA Symposia on Molecular and Cellular Biology, vol. 107. From a workshop, Lake Tahoe, CA, Feb. 1988.

**Toxicological Chemistry.** A Guide to Toxic Substances in Chemistry. Stanley E. Manahan. Lewis, Chelsea, MI, 1988. xiv, 317 pp., illus. \$45.

**Treatise on Analysis.** Vol. 7. J. Dieudonné. Academic Press, San Diego, CA, 1988. xiv, 366 pp. \$69.95. Pure and Applied Mathematics, vol. 10-7.

**Trends in Synthetic Carbohydrate Chemistry.** Derek Horton, Lynn D. Hawkins, and Glenn J. McGarvey, Eds. American Chemical Society, Washington, DC, 1989. xiv, 345 pp., illus. \$69.95. ACS Symposium Series, vol. 386. From symposia, New York, NY, April 1986, and New Orleans, LA, Aug.-Sept. 1987.

**Virus-Induced Immunosuppression.** Steven Specter, Mauro Bendinelli, and Herman Friedman, Eds. Plenum, New York, 1989. xxii, 477 pp., illus. \$79.50. Infectious Agents and Pathogenesis.

**Whither Ethology?** P. P. G. Bateson and Peter H. Klopfer, Eds. Plenum, New York, 1988. xiv, 278 pp., illus. \$49.50. Perspectives in Ethology, vol. 8.

## Products & Materials

### *Symbolic and Numerical Math Software*

PC MACSYMA is a software program that automates mathematical computations in algebra, calculus, numerical analysis, and graphics. The program has 1500 commands and options; its features include trigonometric and hyperbolic functions and inverses, Poisson series, matrix exponentiation, Laplace transforms, vector and tensor analysis, and complex arithmetic. Also included in the program are a debugger, a compiler, and a code generator for the computer languages C, Fortran, and TeX. PC MACSYMA operates on personal computers with an 80386 microprocessor chip and MS-DOS. \$2900. Symbolics. Circle 447.

### *Enhanced pH Meter*

The PHOM-10 is a combination pH meter, datalogger, and printer. Data is collected with a 3-in-1 electrode that measures pH, millivolts, and temperature; alternatively, a combination electrode and optional temperature probe may be used. The built-in thermal dot printer can provide a hard copy of the data at any time, or the researcher can program print intervals between 10 s and 20 hours. A memory backup system retains data if power has been lost or turned off. Other features include audible high and low alarms, dual-point calibration, user prompts, error recognition, and autolocking. An RS-232C output is available. OMEGA Engineering. Circle 450.

### *Statistical Software*

SOLO 2.0 is a statistical software program with interactive graphics. Its capabilities include descriptive statistics, cross tabulation and frequency tables, *t* tests, analyses of variance and covariance, regression, cluster analysis, discriminant analysis, factor analysis, forecasting, nonparametrics, scatterplots, and probability calculations. Data

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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.

can be displayed in several types of one-dimensional, two-dimensional, three-dimensional, and multidimensional graphs. A database accepts as many as 250 variables and 32,000 cases; data can be entered by hand or imported from ASCII files. Transformations can also be performed on the data in the database. Two optional add-on programs are available; one contains routines for correlation analysis, regression, and analysis of variance, and the other has programs for experimental design and quality control. SOLO 2.0 operates on IBM PC and compatible computers. \$149; \$49 each for optional additions. BMDP Statistical Software. Circle 451.

### *Supercritical Fluid Chromatograph*

The model 10000 is a high-pressure supercritical fluid chromatograph that has a maximum operating pressure of 10,000 psi. This pressure allows the analysis of many compounds not soluble at 6,000 psi. Also, supercritical solvent fluid increases its density with increased pressure, thus increasing solvating power, which is a function of fluid density. Computer Chemical Systems. Circle 448.

### *Modular Micro Gas Chromatograph*

The M200S is a single-module portable gas chromatograph that can be easily upgraded to a double-module system. Because the chromatograph uses short, narrow columns, a typical gas analysis takes 20 to 30 s. The 5.4-kg M200S is portable, allowing it to be taken to the sample, rather than the other way around; this minimizes sample contamination, mislabeling, and loss. Its thermal conductivity detector has a range from 0.000001 to 100%. \$4975. Microsensor Technology. Circle 442.

### *Microelectroeluter*

The Centrilitor microelectroeluter recovers proteins and nucleic acids from electrophoretic gel slices. Applications for the Centrilitor include concentrating DNA fragments after gel purification and simultaneously recovering proteins and removing ampholytes from isoelectric focusing gels. Because sample is eluted directly into microconcentrators, no handling is needed for the unit to electroelute and concentrate the sample and remove detergent. The microconcentrators are available with molecular

weight cut-offs of 3,000, 10,000, 30,000, and 100,000. Between 1 and 25 µg of sample can be recovered. Amicon Division, W. R. Grace. Circle 446.

### *Immunobiochemical Services*

Custom immunobiochemical services are available, including hapten-carrier conjugation; antibody purification, characterization, and labeling; and complete immunoassay development. Berkeley Antibody. Circle 458.

### *Scanning Tunneling Microscopy System*

The STM is an automated desktop scanning tunneling microscope. It contains an optics subsystem for better viewing of the sample and an adaptive digital feedback



control system that permits a variable scan rate and large sample sizes. The researcher can control the instrument and acquire and display data with the integrated menu-driven software. QuanScan. Circle 454.

### *Literature*

*HPLC Columns & Fittings* is a catalog of high-performance liquid chromatography (HPLC) columns ranging in size from microbore analytical to large-scale preparative. Anspec. Circle 463.

The *B Cell Activation Chart* depicts antigen expression from early B cell ontogeny through mature lymphocyte activation and plasma cell development. Coulter Immunology. Circle 464.

*Spec/HPLC Grade Solvents* is a product brochure with specifications for a line of solvents for spectrophotometry and high-performance liquid chromatography (HPLC). Alfa Products. Circle 465.

The brochure *714 HPLC System Controller* describes a computer-based programmable controller for high-performance liquid chromatography (HPLC) pumps and systems. Axxiom Chromatography. Circle 466.

# 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.

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**To ESTIMATE ad cost:**  
Structure ad copy on a separate page, on lines of 52 characters and spaces. Include any desired heading. Each line of heading, and/or extra line spaces, and all partial lines (including centered reply information) are counted as full lines. Ad titles located within the text are printed in boldface caps and are only 32 characters per line. In ESTIMATING the cost, multiply total lines  $\times$  \$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.)

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

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

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

Blind ad replies should be addressed as follows:

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

## POSITIONS WANTED

**Biochemist, B.S.; M.B.A.** Candidate. Experience in development of HPLC hardware and chromatographic supports; protein isolation, purification, and characterization; product enhancements, and technical support. Seeks high profile position in product marketing and development in southern California. Box 80, SCIENCE.

**Biopsychologist/Neurophysiologist, Ph.D.** UCLA postdoctoral experience; single and multiple unit studies of sensory and memory processes; topographic brain mapping studies of Alzheimer's disease; presently assistant professor at midwest medical school, seeks research position. Box 76, SCIENCE.

**Fish Biologist, Ph.D.** 1987. Energetics and Ecology. Experience in energetics modeling. Good publication record. Seeking postdoctoral position. c/o Wei Ge, 3A-9202, 112 Street, Edmonton, Canada T6G 2C5.

## POSITIONS WANTED

**Flow Cytometrist/Immunologist, Ph.D.** Eight years of experience in flow cytometry, including detection of DNA aneuploidy in human genetic disease, sex determination and quantitative comparison of cellular DNA in numerous species of the major vertebrate classes, quantification of DNA in normal and malignant cells, study of fetal cells in maternal circulation and lymphocyte typing. Strong interest in flow cytometric detection and assay of mutagens and direct quantification of their effects in individuals and populations. Box 63, SCIENCE.

**Freelance 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.

**Mass Spectroscopist, Ph.D.** Broad and productive research experience applying mass spectrometry in the chemical and biological sciences. Many publications. Excellent writing and interpersonal skills. Experienced in all aspects of NIH grant processes. Seeks interdisciplinary opportunity at the mid to senior professional level in academia, government, or private sector. Box 81, SCIENCE.

**M.S. Plant Biochemist.** Three publications in plant enzymology/physiology. Experienced plant tissue culture/regeneration, maize pollenation/genetics, many biochemical techniques. Nursery and botanic garden experience. Seeks position utilizing broad based skills in biochemistry and plant science. Box 78, SCIENCE.

**Registered Patent Agent.** Patent searches, patentability opinions, application preparation and submission. Scott Ramsey, Ph.D., 5253 Even Star Street, Columbia, MD 21044. Telephone: 301-730-9467.

**Research Scientist, Ph.D.** Looking for an interesting research project. Background in wound healing, plasma proteins, and connective tissue. Box 70, SCIENCE.

**Systematic Entomologist.** Ph.D. 1982. Smithsonian Institution Postdoctoral Fellow 1982-1983. Research associate, Smithsonian-funded project on Indian Cicinellidae 1984-1986. Research experience in Syrphidae, Coccinellidae, other Diptera and Coleoptera. Fifty publications. Editor and publisher of international entomology journal since 1981. Extensive private collection of Indian insects. Seeks research/curatorial position in museum or university. Box 82, SCIENCE.

**Toxicologist, Ph.D.,** Board-certified with 10-plus years of industrial experience seeks position in California: chemical, consumer product, pharmaceutical, and hazardous waste site experience. Box 71, SCIENCE.

## POSITIONS OPEN

**ASSISTANT DEAN, ENGINEERING/SCIENCE/MATHEMATICS.** Ocean County College has extended its search for this 12-month position. Master's degree required, earned Doctorate desired. Five years of teaching experience in appropriate subject area at post-secondary level and demonstrated leadership in educational administration, preferably at department level, required. Send résumé, transcripts, and three professional letters of reference to: **Ocean County College, Personnel Department, CN2001, Toms River, NJ 08754** by 16 June 1989. *Affirmative Action/Equal Opportunity Employer.*

### ASSISTANT PROFESSOR OF HORTICULTURAL ENTOMOLOGY

The Department of Entomology, University of Missouri, invites applications for this 12-month, tenure-track position to develop an extension program (70% effort) and complementary research program (30%) on horticultural arthropods. Ph.D. in entomology, effective communication and teaching skills, and demonstrated research ability are required. Submit by 1 August 1989 a letter describing qualifications and goals; résumé; transcripts; publications; and request four letters of reference, all to be sent to: **R. D. Hall, Chair Search Committee, Department of Entomology, 1-87 Agriculture Building, University of Missouri, Columbia, MO 65211.** Telephone: 314-882-8254. *The University of Missouri is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### THE UNIVERSITY OF CALGARY ACADEMIC POSITION NEUROSCIENCE RESEARCH GROUP

The University of Calgary Department of Medical Physiology invites applications for a limited term academic position in the Neuroscience Research Group. Applicants should have a Ph.D. or equivalent with research experience in the field of autonomic (systems) neurophysiology. Academic rank and salary will be commensurate with qualifications and experience.

*In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The University of Calgary is committed to employment equity.*

Applicants should submit their curriculum vitae and the names of three referees before 15 July 1989, to:

**Dr. J. S. Davison**  
Professor and Head  
Department of Medical Physiology  
Faculty of Medicine  
The University of Calgary  
3330 Hospital Drive N.W.  
Calgary, Alberta T2N 4N1

### UNIVERSITY OF ROCHESTER SCHOOL OF MEDICINE AND DENTISTRY DEPARTMENT OF PHYSIOLOGY ASSISTANT PROFESSOR

Applications for a tenured research and teaching position are invited. Physiologists, biophysicists and molecular biologists studying channels, receptors and transport mechanisms in membranes and/or regulation of cellular processes will be considered. Applicants should be involved in the development of new concepts or techniques and/or their application to situations not previously studied. Specific area of interest is less important than creative work at the forefront of a field. Curriculum vitae, description of research interests, and a list of four or more references should be sent to: **Dr. Paul Horowitz, Department of Physiology, Box 642, University of Rochester, School of Medicine and Dentistry, Rochester, NY 14642.** *An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

**ASSISTANT PROFESSOR AND COORDINATOR OF INSTRUCTIONAL DESIGN AND LEARNING TECHNOLOGY.** Provide leadership in instructional development and use of various teaching methodologies and technologies in the College of Nursing. Administers the College of Nursing's student learning center.

Qualifications: Ph.D. in instructional technology, instructional development, learning systems design, or related field. Background or experience in health professional education. Application deadline: 1 September 1989.

Contact:

**Dr. Gladys A. Courtney, Dean**  
College of Nursing  
A230 Life Sciences  
Michigan State University  
East Lansing, MI 48824-1317  
Telephone: 517-355-6523

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### ASSISTANT PROFESSOR POSITIONS CELLULAR NEUROBIOLOGY AND SYSTEMS NEUROBIOLOGY DEPARTMENT OF PSYCHOBIOLOGY UNIVERSITY OF CALIFORNIA, IRVINE

Applications are invited for two tenure-track positions at the level of assistant professor in cellular neurobiology and systems neurobiology. Preference will be given to applicants who have demonstrated expertise in research areas of interest to the department. The Department of Psychobiology emphasizes interdisciplinary approaches to the study of neural plasticity and behavior. The current major research themes of the department are development, reorganization following injury and disease, and learning and memory. Please submit by 15 August 1989, curriculum vitae, description of research interests, and three confidential letters of recommendation to: **Chair, Department of Psychobiology, University of California, Irvine, CA 92717.**

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## POSITIONS OPEN

### ASSISTANT PROFESSOR IN NEUROPATHOLOGY

Applications are invited for an assistant professor of neuropathology. We seek a Board-eligible, research-oriented neuropathologist with basic scientific interests in the broad areas of slow viruses/dementias or genetic/tumor research. Diagnostic skills are a prerequisite. The position includes potential for academic advancement. Start date is first quarter of academic year 1989. Send curriculum vitae and three names of reference to: **Dr. Laura Manuelidis, Department of Surgery, Section of Neuropathology, Yale University School of Medicine, P.O. Box 3333, New Haven, CT 06510.** *Yale is an Equal Opportunity/Affirmative Action Employer.* Prefer applications received by 15 June 1989.

**ASSISTANT RESEARCH NEUROCHEMIST** needed to conduct joint research on iron metabolism in the central nervous system: iron transport and storage proteins, receptors, mRNA and protein localization, and tissue transplants. Requirements: Ph.D. in neurochemistry. Three years of experience in oligodendrocyte and astrocyte cell culture, preparation of monoclonal and polyclonal antibodies, RIA, ELISA, immunocytochemistry, protein purification, receptor studies, radioiodination and autoradiography. Must also have 2 years of postdoctoral experience in iron metabolism research. Job location: Los Angeles, California, \$36,000 per year; 40-hour week. Send this advertisement and résumé, including summary of research experience, to: **Job #BLW3735, P.O. Box 9560, Sacramento, CA 95823-0560**, by 17 June 1989.

### BIOANALYTICAL CHEMIST

The Research Triangle Institute is seeking a full-time bioanalytical chemist to participate in interdisciplinary research programs. The position requires a Ph.D. in chemistry/pharmaceutical chemistry/pharmacology with postdoctoral training and a minimum of 2 years of experience in each of the following: (i) quantitation of picogram quantities of steroids in biological matrices by immunoassays; (ii) analysis of 0.01 mg/liter concentrations of steroids by HPLC; (iii) work with laboratory animals; (iv) determination of pharmacokinetic parameters and (v) supervision of B.S.-level laboratory personnel. The successful candidate will participate both in existing programs and in the development of new or expanded research areas.

RTI offers a comprehensive employee benefits package. The salary range for this position is \$36,000 to \$42,000 per annum commensurate with qualifications.

Interested applicants should send their curriculum vitae and letter of interest to: **Office of Personnel (CLS-J3), Research Triangle Institute, P.O. Box 12194, Research Triangle Park, NC 27709.** Deadline for receipt of applications is 16 June 1989. *RTI is an Equal Opportunity/Affirmative Action Employer.*

**BIOLOGICAL SCIENCE—ASSISTANT PROFESSOR**, tenure-track. Begin September 1989. Ph.D. required. Teach soil morphology and classification, ecology, environmental science, limnology, local fauna and principles of biology. Applications reviewed beginning 23 June 1989. Send letter, résumé, undergraduate and graduate transcripts, and three letters of reference to: **Dr. Charles Chapman, Biology Department, Troy State University, Troy, AL 36082.** *TSU is an Affirmative Action/Equal Opportunity Employer.*

**BIOLOGIST:** Cornell College, a private liberal arts college located in Mount Vernon, Iowa, seeks candidates to fill a 1-year position in its Biology Department. The successful applicant may be considered as a tenure-track candidate for 1990 to 1991. Courses to be taught include genetics, developmental biology, and introductory biology. Send curriculum vitae and three letters of reference to:

**Paul Christiansen, Chair  
Department of Biology  
Cornell College  
Mt. Vernon, IA 52314**

Formal consideration of applications will begin 1 July 1989.

*Cornell College is an Equal Opportunity/Affirmative Action Employer and actively seeks applications from women and minority candidates.*

## POSITIONS OPEN

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

The Department of Energy (DOE) is seeking applicants for the Senior Executive Service position of Associate Director for Health and Environmental Research. This executive plans/manages a broad research program conducted primarily at national laboratories and universities to determine the health and environmental consequences and medical applications of energy activities. The program includes: biological and epidemiological research to quantify human health risks of exposures to radiation and chemicals; environmental sciences research to determine how such agents move through and affect the atmosphere, oceans, and terrestrial ecosystems including CO<sub>2</sub>; research to study effect of greenhouse gases on climate/vegetation; measurement/dosimetry research to improve radiation, chemical, and biological instrumentation; fundamental life science research, with special emphasis on molecular biology, to conduct human genome studies and structural biology investigations; and nuclear medicine research to develop new approaches for improved study, diagnosis and treatment of human diseases.

The preferred candidate will be a U.S. citizen with an M.D. or Ph.D. degree in an appropriate biological science. He/she will have experience in managing, evaluating and directing diverse basic/applied research programs in biomedical sciences; and experience in scientific program and policy development. Salary range: \$68,700 to \$78,600. Position location: DOE facility, Germantown, Maryland.

Direct inquiries to and obtain application materials from: **Ms. Rosalee Williams, MA-504.1; Office of Personnel, U.S. DOE, 1000 Independence Avenue, SW, Washington, DC 20585**, or call: 202-586-8461. Completed applications must be postmarked no later than 7 July 1989.

*U.S. DOE is an Equal Opportunity Employer.*

### TRUDEAU INSTITUTE, INC. BASIC RESEARCH SCIENTISTS

The Trudeau Institute is always interested in receiving applications for tenure-track, full-time research staff positions from appropriately trained individuals. Appointments may be made at the assistant, associate, or full member (professor) levels, depending on scientific ability and past performance. Successful applicants will be expected to develop independent research programs in immunology, immunopathology, molecular immunology, or related fields.

The Trudeau Institute is a free-standing, not-for-profit, basic research institute with modern facilities, up-to-date equipment, in-house animal production, efficient management, and an international reputation for excellence. Current staff interests include: cancer immunology, transplantation immunology, immunity to infectious and parasitic diseases, regulation of immune responses, and the production and function of cytokines. Adequate start-up funding for new projects is available from institute resources. Salaries and benefits are competitive, and working conditions are conducive to a productive career in research.

Applications consisting of curriculum vitae, the names and addresses of three references, and a brief description of research interests, should be addressed to:

**Dr. Robert J. North, Director  
Trudeau Institute, Inc.  
P.O. Box 59  
Saranac Lake, NY 12983**

### CELL BIOLOGIST

Biotechnology company in the San Francisco Bay Area is actively recruiting cell biologists to join a multidisciplinary group for discovery and development of novel carbohydrate-based pharmaceuticals. Successful applicants will have a Ph.D. and experience in cell-cell interactions, cell surface receptors, and culture techniques. Experience with carbohydrates and lectins helpful. The company wishes to build a scientific staff consisting of outstanding academic researchers. We offer an exciting research environment of the highest quality for scientists wishing to pursue cell surface receptor research in a multidisciplinary environment. Salaries and benefits are highly competitive. Please send résumé in confidence to: **Box 83, SCIENCE.**

## POSITIONS OPEN

### CHAIRPERSON DIVISION OF BASIC PHARMACEUTICAL SCIENCES COLLEGE OF PHARMACY XAVIER UNIVERSITY OF LOUISIANA SEARCH REOPENED

This is a full-time, tenure-track, 12-month appointment at the associate or full professor level. The Division includes faculty from the disciplines of medicinal chemistry, pharmacology, and pharmaceuticals. Salary and rank are negotiable. Applicant must have a Ph.D. in basic pharmaceutical sciences with an excellent track record in teaching and research. A B.S. in pharmacy is preferred. The individual is expected to develop and participate vigorously in research, provide leadership in developing a graduate program, and participate in undergraduate teaching. Submit curriculum vitae and have three letters of recommendation mailed by 31 July 1989 to: **Dr. Vimal Kishore, Chairman of the Search Committee, College of Pharmacy, Xavier University of Louisiana, 7325 Palmetto Street, New Orleans, LA 70125.** *Xavier University, a predominantly Black Catholic-affiliated University, is an Affirmative Action/Equal Opportunity Employer.*

### CHIEF LABORATORY ANIMAL MEDICINE

The Memorial Sloan-Kettering Cancer Center (MSKCC)—Cornell University Medical College Research Animal Resource Center has an opening for Chief, Laboratory Animal Medicine (LAM). The Chief of LAM will supervise veterinary trainees and a staff of veterinary technicians. He or she will be responsible for the disease prevention, colony health monitoring, and clinical care of all research animals housed at the Cancer Center and the Medical College. The Chief will also be responsible for supervising investigator assistance programs in animal use and surgery, will participate as a member of the Institutional Animal Care and Use Committees in reviewing proposed animal research, and will participate in training programs for the investigative and animal care staffs. Independent or collaborative research is encouraged. Requisites include a degree from an AVMA accredited institution, a license to practice veterinary medicine, and Board certification in laboratory animal medicine or 5 years of experience in LAM. Publications are desirable. Send curriculum vitae and three letters of recommendation to: **Dr. David Myers, D.V.M., Ph.D., Director, Research Animal Resource Center, Room 108K, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.** *MSKCC is an Equal Opportunity Employer.*

### CLINICAL ELECTROPHYSIOLOGIST

The Cullen Eye Institute (Department of Ophthalmology, Baylor College of Medicine) is receiving inquiries for a Junior Faculty Position as a Clinical Electrophysiologist. We seek a candidate with sufficient clinical post-doctorate experience in ERG, EOG, and VER to run a diagnostic service. Clinical research interests desirable. Academic rank and salary will relate to qualifications. Please send curriculum vitae, date of availability, and list of three academic references to: **Gunter K. von Noorden, M.D., Cullen Eye Institute, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030.** *An Equal Opportunity Employer.*

### CNS NEUROBIOLOGIST

New York State Psychiatric Institute, a Columbia University affiliate, is seeking an outstanding researcher to pursue innovative research on the cellular or molecular biology of the CNS impacting on neuropsychiatric disorders. Current research in neuropathology includes: (i) studies of identified mesolimbic dopamine neurons, (ii) receptor mechanisms and dopamine system development, and (iii) pathological effects of ECT. Joint Columbia appointment at the assistant professor level in psychiatry, neuropathology and/or the Center for Neurobiology and Behavior expected. Competitive salary with liberal benefits offered. *Affirmative Action/Equal Opportunity Employer.* Inquires to: **Dr. Stephen Rayport, Chairman, Neuropathology Search Committee, P.I. Box #62, 722 West 168th Street, New York, NY 10032.** Telephone: 212-960-5571.



# RESEARCH SCIENTIST

## Fungal Biochemist/Physiologist

For more than a century, scientists at ELI LILLY AND COMPANY have developed innovative, high quality pharmaceutical products. Lilly invests over \$500 million in research-and-development programs annually. More than 3,000 scientists at the company's Lilly Research Laboratories are pursuing creative research programs that involve many important health care needs.

To further build its research capabilities, Lilly is seeking a self-motivated, innovative scientist to plan, organize, and direct a basic research program on the biochemistry and physiology of pathogenic fungi. Qualifications include the following:

- Doctoral-level microbiologist (or related discipline) with relevant postdoctoral experience and/or independent research in the area of fungal biochemistry and physiology.
- Demonstrated ability to conduct basic research on the biochemistry of pathogenic microorganisms and an understanding of molecular biology of lower eukaryotes is highly desirable.
- The investigator will join a multidisciplinary infectious diseases research effort and is expected to develop an independent research program directed toward the identification, verification, and characterization of specific biochemical targets for the design of effective and safe antifungal agents.

In addition, this scientist must have the leadership capabilities needed—technical, communication, interpersonal, and organizational skills—to build a research program.

Eli Lilly and Company is committed to scientific excellence. Lilly provides a stimulating professional atmosphere with many opportunities for collaborative, multidisciplinary research. The company offers an attractive total compensation program. Entry level and salary will be based upon each candidate's experience.

For prompt consideration, please forward your *curriculum vitae* to:

**John W. Crooks, Manager**  
**Ph.D. Recruitment (IDR)**  
**Eli Lilly and Company**  
**Lilly Corporate Center**  
**Indianapolis, Indiana 46285**



Equal Opportunity Employer



## POSITIONS OPEN

### DIRECTOR, DIVISION OF BIOTIC SYSTEMS AND RESOURCES NATIONAL SCIENCE FOUNDATION WASHINGTON, DC 20550

NSF's Directorate for Biological, Behavioral and Social Sciences is seeking qualified candidates for the position of Director, Division of Biotic Systems and Resources. The Division funds research in systematic biology, population biology and physiological ecology, ecosystem studies and ecology, and biological research resources.

This Senior Executive Service position, with a salary range of ES-1 (\$68,700) to ES-4 (\$76,400), is announced on both a career and 2- to 3-year limited term basis. Alternatively, assignment may be made under the provisions of the Intergovernmental Personnel Act. Applicants must have a Ph.D. or equivalent experience in biological subdisciplines supported through the programs of the Division (e.g., ecology, ecosystem studies, population biology and physiological ecology, and systematic biology); substantial research contributions or innovative leadership in research administration in the biological sciences; and the ability to achieve organizational objectives through the supervision and management of subordinates.

Applicants should contact: **Barbara Coleman on 202-357-7601** (hearing impaired individuals may call **TDD 202-357-7492**) to request Announcement EP 89-5 (career), EP 89-15 (limited term), or EP 89-25 (IPA) for complete qualification requirements and application procedures. Applications must be received by 7 July 1989.

*Equal Opportunity Employer*

### ECOLOGIST

Assistant professor (tenure-track) position anticipated, January 1990, in Department of Biological Sciences, University of New Orleans. Postdoctoral experience required. Candidate expected to conduct independent research in community ecology of aquatic or terrestrial systems. Teaching includes a basic course in ecology. Applicants should send résumé and statement of research goals and have three letters of reference sent to: **Dr. G. R. Welch, Department of Biological Sciences, University of New Orleans, New Orleans, LA 70148**. Deadline: 30 June 1989. *An Affirmative Action/Equal Opportunity Employer.*

### ENVIRONMENTAL (ECO)-TOXICOLOGIST

Procter & Gamble has an opening for a Ph.D. or postdoctoral eco-toxicologist in its Environmental Safety Division in Cincinnati, Ohio. This entry-level staff position offers a combination of environmental research and issue management in a multidisciplinary setting. Communication and leadership skills are essential, as are training and experience in aquatic or terrestrial biology/ecology, and environmental toxicology.

*Applicants must be U.S. citizens or hold a permanent resident visa.*

Send résumé and publication list to: **Dr. T. J. Logan, Manager, Ph.D. Recruiting, Environmental Toxicology Position, The Procter & Gamble Company, Miami Valley Laboratories, P.O. Box 398707, Cincinnati, OH 45239-8707.**

*Procter & Gamble is an Equal Opportunity Employer.*

### FACULTY POSITION IN BIOCHEMISTRY AND MOLECULAR BIOLOGY

Excellent facilities, good support and good research environment available for established or highly promising researcher. Level of appointment commensurate with qualifications. Preference given to candidate who can enhance existing group of researchers on hormone action, in areas such as molecular structure/function relationships (NMR, x-ray crystallography) or study of peptide hormones. By 31 August 1989, send curriculum vitae, bibliography, and have three references write to: **Dr. John T. Penniston, Department of Biochemistry and Molecular Biology, Mayo Medical School, Rochester, MN 55905**. *Mayo is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**ELECTRON MICROSCOPIST:** The Department of Pathology, University of Kentucky, College of Medicine, is seeking a faculty member at the instructor or assistant professor level to supervise the electron microscopy laboratory and to direct the resident education program in electron microscopy. Experience in scanning and transmission electron microscopy is essential and previous experience in teaching is highly desirable. This is a nontenured-track position. Please send curriculum vitae to: **Deborah Powell, M.D., Professor and Chairman, Department of Pathology, Albert B. Chandler Medical Center, University of Kentucky, Lexington, KY 40536-0093**. *An Equal Opportunity/Affirmative Action Employer.*

### ELECTRON MICROSCOPY RESEARCH SPECIALIST

Full-time position available for an individual to be responsible for the day-to-day operation and maintenance of our E.M. facility. A sound knowledge of transmission and scanning microscopy is required. Also required is experience in handling of biological samples and clinical pathology specimens; preparative procedures (conventional and cryomethodologies, fixation and embedding, ultrathin sectioning and immunolabeling) and photographic techniques. Applicant must be willing to collaborate with a variety of laboratories and investigators. A master's degree in biology, biochemistry, or biophysics is preferred. We offer an excellent salary and benefits package. Send résumé to: **Personnel Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111**. *We are an Equal Opportunity Employer.*

**ENVIRONMENTAL SYSTEMS ENGINEER—**Ph.D. in chemistry or chemical engineering. Five years of experience in the job offered or 5 years of experience as a researcher. Research experience should include: (i) Waste treatment technology as evidenced by publications in refereed journals; (ii) Working at an operational nuclear and hazardous waste site; planning, coordinating and leading major technical projects. Conduct radiological and chemical investigations and assessments of contamination at hazardous waste sites, including identification of radionuclide and chemical contamination levels, environmental transport parameters, modeling of long-term health impacts to humans, analysis of alternative remedial actions and mitigative measures related to treatment, recovery, and long-term management of radioactivity and chemically hazardous waste disposal sites. Salary: \$4400 per month; 40 hours per week; 8:30 a.m. to 5:00 p.m.

Send résumés to: **Illinois Department of Employment Security, 401 South State Street—3 South, Chicago, IL 60605**, Attention: **Marie Ninneman**, Reference #9037-N.

*An Employer-Paid Ad.*

### FACULTY POSITION

The Department of Biochemistry at Eastern Virginia Medical School has an open faculty position for an outstanding candidate at the level of assistant or associate professor. This is a tenure-track position with a competitive 12-month salary and provides an excellent opportunity for independent research and teaching. The successful applicant will be expected to develop a strong research program in an area of modern biochemistry or molecular biology such as the mechanism of gene regulation. DNA-protein interactions, metabolic regulation, enzyme mechanism, or hormone receptors and transmembrane signaling. Faculty members in the department are expected to attract independent research grants and to spend a major part of their effort in research.

Please send curriculum vitae, a statement of research interests and plans, and three letters of reference to **Dr. Karl A. Schellenberg, Chairman, Department of Biochemistry, Eastern Virginia Medical School, 700 Olney Road, Norfolk, VA 23501**.

*Affirmative Action/Equal Opportunity Employer*

**HISTOLOGY/EMBRYOLOGY:** Sabbatical replacement with potential for renewal is sought to teach these courses (one each semester), supervise laboratory teaching assistants therein, and serve on departmental committees. Beginning 1 August 1989. Salary: \$24,000. Call: 1-800-334-8635, Extension: 6771. **Burt Monroe, Chairman, Department of Biology, University of Louisville, Louisville, KY 40292**. *An Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### EXCEPTIONAL GRADUATE STUDENTS

Two very generous stipends (\$15,000 per year) have recently been made available to the Department of Pharmacology, Tulane University School of Medicine. *Both U.S. citizens and resident aliens may apply.* The graduate program in pharmacology has been funded by an NIH training grant for 30 years. Research training is available in neuro-, cardiovascular, pulmonary, hemato-, tissue and cellular pharmacology, cancer and AIDS research, and toxicology. For further information contact: **Dr. James Fisher, Department of Pharmacology, Tulane University School of Medicine, 1430 Tulane Avenue, New Orleans, LA 70112**. Telephone: 504-588-5444.

### FACULTY POSITION IN PALEONTOLOGY UNIVERSITY OF CALIFORNIA AT BERKELEY

The Department of Integrative Biology seeks a paleontologist for a tenure-track assistant professorship or a tenured associate professorship starting 1 July 1990. Applicants should have an outstanding empirical and theoretical research program in a major field of modern paleontology. They must be committed to excellence in teaching at the undergraduate level and have the ability to stimulate productivity and creativity from graduate students.

The paleontologist will join zoologists, botanists, and paleontologists in an innovative, new department responsible for teaching and research in the broad area of biology. Plans are under way for an interdisciplinary Graduate Group in Paleontology, centered on the Museum of Paleontology, which will continue the strong Berkeley tradition in paleontology. In addition to five other current and six emeritus faculty in paleontology and the Museum staff, the paleontologist will interact in teaching and research with numerous anthropologists, botanists, zoologists, and geologists in the Department and Graduate Group. The Department will be housed in a fully remodeled building containing modern laboratories and offices, the Museum of Paleontology, University Herbaria, Museum of Vertebrate Zoology, and Biology Library. The Museum of Paleontology's collections rank among the largest and most diverse in the nation. The Botanical Garden, various field stations, and the libraries' extensive paleontological holdings continue to support paleontological teaching and research.

Applicants should send curriculum vitae, statement of research and teaching interests, names and addresses of three references, relevant reprints and manuscripts to: **Chairman, Paleontology Search Committee, Department of Integrative Biology, University of California, Berkeley, CA 94720**.

Closing date for receipt of applications will be 2 October 1989.

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

**GLOBAL CHANGE.** Scripps Institution of Oceanography, University of California at San Diego, invites applications for **ASSISTANT, ASSOCIATE, OR FULL PROFESSOR** (tenure-track or tenured) positions in meteorology, climatology, or atmospheric chemistry, and other fields closely related to the subject of global change. The successful applicants will teach and participate in research programs directed at the physical and chemical bases of natural and anthropogenic global change.

Rank and salary will be commensurate with qualifications and experience based on the University of California pay scale. At the time of appointment the successful candidate(s) must have a Ph.D. in a physical science. The positions will involve teaching, supervision, and support of graduate students, and the development of research programs supported by extramural funds. Associate or full professorial candidates must show evidence of a strong research record; assistant-level candidates will be expected to show evidence of their potential through a publication record appropriate to their experience. Send letter of application including description of research interests, list of publications, résumé of teaching experience, and names of three referees to: **Chairman—GC, Scripps Institution of Oceanography, UCSD, Mail Code A-008, La Jolla, CA 92093, U.S.A.** Closing date for applications is 1 September 1989. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

## DIRECTOR, DIVISION OF CARDIOLOGY

The Department of Internal Medicine of St. Louis University School of Medicine invites applications and nominations for the position of Director of its Division of Cardiology. We seek a physician-scientist with a substantial publication record and a history of peer-reviewed grant support. The Director will be responsible for leading a large nationally recognized Division, which has significant potential for further development of its clinical and research programs. Generous research space and financial support will be provided. Please forward nominations and applications to Coy D. Fitch, M.D., Drefs Professor and Chairman, Department of Internal Medicine, St. Louis University School of Medicine, 1402 South Grand Boulevard, St. Louis, MO 63104. Equal Opportunity Employer M/F/H/V.



**St. Louis University  
School of Medicine**

## RESEARCH SCIENTIST protein chemistry

Our client, a major Detroit manufacturing company with modern plant locations throughout the United States, has an exceptional opportunity available for a Research Scientist in Protein Chemistry.

You will be working with a specialized group of scientists in the areas of molecular biology and fermentation. This highly challenging project involves the use of protein engineering in the design of proteins for therapeutic use in humans.

This position requires that you have a Ph.D. and experience in state-of-the-art protein chemistry techniques. A strong background in protein purification and characterization along with experience in a wide variety of protein chemistry techniques and instrumentation is essential.

Our client offers a competitive compensation and complete benefits package. Qualified candidates are invited to send their resume to: **Confidential Reply Service, Dept. AJK, Thompson Recruitment Advertising, 3000 Town Center, Suite 1600, Southfield, MI 48075.** All replies will be forwarded to our client unopened. No phone calls please. Our client is an equal opportunity employer M/F/H/V.

Confidential Reply Service

Thompson Recruitment Advertising



# SANDOZ RESEARCH INSTITUTE

## POSITIONS IN METABOLIC RESEARCH

Sandoz Pharmaceuticals Corporation is approaching the 21st century with an expanding commitment towards development of safe and effective therapeutic agents for the treatment of cardiovascular, metabolic and immunologic diseases.

Two complimentary Sandoz Research Institute research and drug development programs, the Diabetes Department and the Department of Lipid and Lipoprotein Metabolism, currently have positions open in the area of metabolic regulation. The successful candidates will join multidisciplinary teams of biochemists, pharmacologists, molecular biologists and medicinal chemists whose goals are directed towards greater understanding of the metabolic mechanisms which may lead to or provide the rationale for novel treatments of non-insulin-dependent diabetes mellitus and hyperlipidemias. A willingness to function as a member of an interdisciplinary team of postdoctoral fellows, senior staff and Visiting Research Faculty members is essential and previous supervisory experience would be helpful. These positions require a demonstrated ability to plan and conduct independent research, a significant publication record, and excellent written and oral communication skills.

### ASSISTANT FELLOW

#### Adipose Tissue Metabolism and Lipolysis

The Diabetes Department of the Sandoz Research Institute is seeking a scientist with a Ph.D. in Biochemistry, Pharmacology or a closely related discipline, at least two years of postdoctoral experience, and interests and expertise in metabolic regulation/enzymology. The candidate will work in the area of control of adipose tissue metabolism and lipolysis and will have the opportunity to develop a creative research program within a stimulating and supportive environment. Please respond to position #661.

### ASSOCIATE FELLOW

#### Lipid Enzymology or Lipoprotein Metabolism

The Department of Lipid and Lipoprotein Metabolism of the Sandoz Research Institute is seeking a scientist with a Ph.D. in Biochemistry or a related discipline and a minimum of 3 years of independent postdoctoral research in one or more of the following research areas: enzymology of cholesterol or glycerolipid synthesis; regulation of lipid synthesis; apolipoprotein and lipoprotein metabolism; regulation of lipid transport. The candidate will develop an independent research program within an environment containing cell biology, molecular biology and animal modeling programs. Please respond to position #656.

Positions at Sandoz offer personal satisfaction, professional opportunity/challenge, competitive salaries and an excellent benefits package. Our campus-like facilities are conveniently located in Northern New Jersey. For prompt consideration, please forward your resume with salary requirements and the position indicated to:



**SANDOZ**  
bringing research to life

Robert N. Saunders, Ph.D.  
Director, Human Resources 403/1  
Sandoz Research Institute  
**SANDOZ PHARMACEUTICALS CORP**  
East Hanover, New Jersey 07936  
An Equal Opportunity Employer M/F/H/V

## POSITIONS OPEN

**FISHERIES MANAGEMENT FACULTY POSITION.** Tenure-track, 12-month position, beginning fall 1989 at the assistant professor level. Ph.D. required. Sixty percent teaching, including ichthyology and an undergraduate and a graduate course, each related to fisheries management. The successful candidate is expected to develop a strong research program in cooperation with resource agencies. Send résumé, transcripts, a statement on teaching and research goals, representative reprints and three letters of recommendation by 30 June to: **Dr. Charles F. Rabeni, Chair, Search Committee, School of Forestry, Fisheries and Wildlife, 112 Stephens Hall, University of Missouri, Columbia, MO 65211.**

*An Affirmative Action/Equal Opportunity Employer.*

### IMMUNOHISTOLOGIST/IMMUNOLOGIST DEPARTMENT OF HEMATOLOGIC AND LYMPHATIC PATHOLOGY ARMED FORCES INSTITUTE OF PATHOLOGY (AFIP)

Position available for a Ph.D. or M.S. candidate with a strong background in immunology or cell biology and experience in cell marker analysis. Duties include establishing and supervising the departmental immunohistology laboratory, performing immunophenotyping of lymph node material and supporting research on antigen expression in human lympho-reticular malignancies. Competitive salary and benefits commensurate with qualifications. Send curriculum vitae, representative reprints, and two references to: **Dr. Kenton S. Hartman, AFIP, Washington, DC 20306-6000.**

**MEDICAL EPIDEMIOLOGIST**—The Centers for Disease Control, AIDS Program seeks a Medical Epidemiologist for an established HIV/AIDS Project in Kinshasa, Zaire. The incumbent functions as Chief, Epidemiologic Research, Projet SIDA, and develops protocols and conducts epidemiologic studies to identify high risk groups, risk factors for infection, cofactors and illnesses associated with HIV infection and AIDS, modes of transmission, opportunities for prevention and control, and provides consultation to other PHS agencies, WHO, and others. Candidates must have a degree of Doctor of Medicine from an approved U.S. or Canadian medical school or a degree from a foreign school provided it is determined to be comparable or equivalent. Candidates must have training, knowledge, skills, and experience appropriate to the position being filled. Candidates must be fluent in French. For additional information regarding this position, contact: **William L. Heyward, M.D., M.P.H., Chief, International Activity, AIDS Program, at 404-639-2060.** Interested applicants should send their applications and curriculum vitae to: **William R. Hudson, Centers for Disease Control, 1600 Clifton Road, Atlanta, GA 30333.** Applications must be received by 30 June 1989. *CDC is an Equal Opportunity Employer.*

### NEUROANATOMIST UNIVERSITY OF ARIZONA

The Departments of Anatomy and Neurology are jointly seeking a new tenure-track faculty member. Preference will be given to applicants with specific research interests in comparative aspects of the structure and function of vertebrate limbic and cortical systems; active interests in work on a variety of species, including humans and non-human primates; actively involved in use of modern neuroanatomical techniques including immunocytochemistry; and capable of interacting with a broad spectrum of neuroscientists, including those interested in behavior, neurophysiology, and neuropharmacology. Successful candidates will be expected to have a well-established research program and be qualified to teach neuroanatomy at the graduate level. Academic rank will be commensurate with the candidate's qualifications. Submit curriculum vitae, two copies of relevant papers, a detailed description of research goals, and have three supporting letters sent to: **Dr. Robert S. McCuskey, Head, Department of Anatomy, College of Medicine, University of Arizona, 1501 North Campbell, Tucson, AZ 85724.** To insure consideration, applications should be received by 30 June 1989; however, applications will be accepted until the position is filled. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer and applications from females and minority group members are strongly encouraged.*

## POSITIONS OPEN

### UNIVERSITY OF CHICAGO LABORATORY COORDINATOR

One to two positions with responsibility for oversight of undergraduate teaching laboratories in the biological sciences. Duties will include new laboratory development and supervision of supply, instruction and maintenance. Knowledge of techniques and equipment of molecular/cell biology essential for one position. Salary commensurate with qualifications. By 1 July 1989 submit curriculum vitae, names of three references, and statement of professional interests to: **Biological Sciences Collegiate Division, University of Chicago, 1116 East 59th Street, Chicago, IL 60637.** *Equal Opportunity/Affirmative Action Employer.*

### MEDICAL PHYSICISTS AND ENGINEERS

The Department of Diagnostic Radiology and Nuclear Medicine at Stanford Medical School has tenure-track faculty positions available for scientists in medical physics and medical imaging. These positions are newly created and will be the initial appointments to a new Division within the Department, which will also include scientists with expertise in NMR spectroscopy and image processing. The appointment will be at the rank (assistant, associate, or full professor) commensurate with prior accomplishments. *Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates.* A Ph.D. in physics, medical physics, or electrical or biomedical engineering is required for this appointment.

The successful candidate will be expected to develop independent research programs as well as participate in collaborative research with members of the Department and other Departments at Stanford. Current major basic research interests of the Department include magnetic resonance imaging, magnetic resonance spectroscopy, nuclear imaging including positron emission tomography, digital radiography and ultrasound image processing. Additional responsibilities include teaching of house officers and medical students, as well as involvement in quality assurance, radiologic equipment testing and radiation safety.

All interested candidates should send a letter of inquiry and curriculum vitae to:

**Albert Macovski, Ph.D.  
Search Committee Chairman  
Professor of Electrical Engineering and Radiology  
Informations Systems Laboratory, Durand 109  
Stanford University  
Stanford, CA 94305**

ABI Biotechnology Inc., a progressive Canadian pharmaceutical company has career development opportunities for a professional individual. **MOLECULAR BIOLOGIST.** Scientist position—nucleic acids. Preference will be given to candidates with experience in the following areas: Work with gene transfer, regulated expression, DNA sequencing; work with bacterial, yeast and mammalian expression systems, maximizing expression, and characterizing expressed products. Qualified candidates may forward their curriculum vitae, publication list and letters of reference to: **Personnel Manager, ABI Biotechnology Inc., 40 Scurfield Boulevard, Winnipeg, Manitoba, Canada R3Y 1G4.**

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

### NEUROPSYCHOLOGIST/NEUROSCIENTIST

The Montreal Neurological Institute invites applications for Head of the Neuropsychology Unit with a faculty appointment as associate or full professor in the Department of Neurology and Neurosurgery, McGill University. Seeking a senior scientist with background and accomplishments in neuropsychology and neuroscience to conduct and coordinate basic and clinical research in neuropsychology as carried out by graduate and postdoctoral students and staff scientists. Salary will be commensurate with background and experience of the individual. Appointment may commence at any time. Inquiries and applications (including curriculum vitae) should be sent to: **Dr. B. E. Jones, Neuroanatomy Laboratory, Montreal Neurological Institute, 3801 University Street, Montreal, Quebec H3A 2B4, Canada.**

## POSITIONS OPEN



### THE UNIVERSITY OF MANITOBA DEPARTMENT OF PHYSIOLOGY MOLECULAR BIOLOGY IN CARDIOVASCULAR SCIENCES

The Department of Physiology, Faculty of Medicine, University of Manitoba, invites applications for two contingent faculty positions at the level of **ASSISTANT PROFESSOR** in the Division of Cardiovascular Sciences. Applicants should have M.D. or Ph.D. degree in any of the medical sciences with 2 to 3 years of post-doctoral experience in molecular biology. Candidates are expected to establish independent research programs in the area of cardiovascular molecular biology and teach both medical and graduate students. *Both men and women are encouraged to apply. In accordance with Canadian Immigration, this advertisement is directed to Canadian citizens and permanent residents.* Please send your résumé, statement of research goals and names of three referees by 15 July 1989 to: **Dr. N. S. Dhalla, Division of Cardiovascular Sciences, St. Boniface Hospital Research Center, 351 Tache Avenue, Winnipeg, Manitoba, R2H 2A6, Canada.**

### PHARMACOLOGIST—TOXICOLOGIST

Applications are invited for several positions in toxicology/pharmacology. Applicants should have a strong background in environmental toxicology. The appointee will be expected to seek external funding for research and nominally participate in teaching activities of the school. Salary will be commensurate with experience. Please send a letter of application, updated curriculum vitae, and three letters of reference to:

**Dr. Howard Mielke  
College of Pharmacy  
Xavier University  
7325 Palmetto Street  
New Orleans, LA 70125  
Telephone: 504-483-7421**

### PLANT MOLECULAR BIOLOGIST/ BIOCHEMIST

DNAP, the world's largest independent agricultural biotechnology company, has immediate openings for research scientists in the Plant Molecular Biology Group. Research areas include expression and targeting in transgenic plants and analysis of fruit ripening. Requires a Ph.D. degree with minimum of 2 years of experience in plant molecular biology or biochemistry. Send curriculum vitae with the names of three references. *An Equal Opportunity Employer.*

**DNA Plant Technology  
Dean Gallinatti  
6701 San Pablo Avenue  
Oakland, CA 94608-1239**

### POSTDOCTORAL FELLOW/ ASSOCIATE SCIENTISTS

We are seeking postdoctoral fellows or associate scientists to join a molecular biology group. The emphasis of the research is on the regulation of gene expression, with specific focus on the mammalian ribosomal DNA genes. The positions require a Ph.D. with significant experience in protein chemistry and/or molecular biology. Candidates for the position of associate scientist should have at least 2 years of relevant postdoctoral training. Experience in tissue culture methodologies would also be desirable.

The Weis Center for Research offers competitive salaries, a comprehensive benefits program, and the opportunity for advancement. The Research Center is housed in a modern, completely equipped facility. The Research Center is within convenient driving distance of New York City, Philadelphia, and Washington, DC, and several major universities, yet it still offers the benefits of a small town environment. Interested candidates should send copies of their curriculum vitae and the names of three references to: **Dr. Lawrence Rothblum, Weis Center for Research, Geisinger Clinic, Danville, PA 17822.**



## POSITIONS OPEN

### PLANT MOLECULAR BIOLOGY

**POSTDOCTORAL POSITION** available January 1990 for 1 year to investigate gene regulation in maize carotenoid biosynthesis. Must have Ph.D. in molecular biology or biochemistry with expertise in recombinant DNA techniques. Send résumé, references, and publications to: **Dr. Eleanore Wurtzel, Biological Sciences, Lehman College of the City University of New York, Bronx, NY 10468. Telephone: 212-960-8643.**



### THE UNIVERSITY OF MANITOBA DEPARTMENT OF PLANT SCIENCE PLANT MOLECULAR GENETICS

The Department of Plant Science, University of Manitoba invites applications for a **TENURE-TRACK POSITION** in plant molecular genetics.

A Ph.D. is required and preference will be given to candidates with postdoctoral experience in molecular genetic techniques currently being applied to crop plant improvement. A strong background in classical plant genetics would be a definite asset. The successful applicant will be expected to develop a research program in collaboration with plant geneticists and crop physiologists working on the improvement of winter wheat and canola. Other duties will include participating in Departmental undergraduate and graduate teaching programs, and the supervision of graduate students. Salary and rank will be commensurate with qualifications and experience.

*The University encourages applications from both men and women. In accordance with Canadian Immigration requirements, priority will be given to qualified Canadian citizens and permanent residents of Canada.*

Applications including curriculum vitae, a summary of formal training and experience in genetics, reprints of recent publications, and the names of three referees should be submitted to: **Dr. I. N. Morrison, Head, Department of Plant Science, University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2.** This position is available immediately. Applications should be received no later than 15 July 1989.

### POSTDOCTORAL ASSOCIATE IN NEUROBIOLOGY

Position available in a laboratory studying the processes controlling neuronal synapse formation and the regulation of neuronal synaptic components. For the regulatory studies, particular emphasis is being given to the neuronal nicotinic acetylcholine receptor and the role of cell-cell interactions in regulating acetylcholine receptor expression in neurons. Relevant techniques include immunofluorescence, electron microscopy, and biochemical and molecular approaches. Please send curriculum vitae, a statement of research experience and interests, and the names of three references to: **Dr. Michele Jacob, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.**

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

### POSTDOCTORAL FELLOW CARBOHYDRATE BIOCHEMISTRY JOHNS HOPKINS SCHOOL OF MEDICINE

Position available 1 July 1989 to Ph.D. with experience in carbohydrate chemistry/biochemistry to synthesize ganglioside receptor ligands used to study neuronal recognition [*J. Biol. Chem.* **264**, 1671 (1989)]. Salary competitive. Send curriculum vitae and names of references to: **Dr. Ronald Schnaar, Department of Pharmacology, Johns Hopkins School of Medicine, Baltimore, MD 21205.**

**POSTDOCTORAL FELLOW/RESEARCH ASSISTANT**—Position available immediately for individual with a Ph.D. in molecular biology, biochemistry or cell biology to study a novel oncogene (PIM-1). The project will concentrate on the role of PIM-1 in growth, differentiation, and neoplastic transformation. Starting salary commensurate with experience. Send current curriculum vitae and three letters of reference to: **Dr. Lalitha Nagarajan, M.D., Anderson Cancer Center, 1515 Holcombe Boulevard, Box 24, Houston, TX 77030.** *An Equal Opportunity/Affirmative Action Employer.*

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## **Research Scientists Toxicology Dept.**

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We're a \$3-billion pharmaceutical corporation recognized worldwide for the products we develop. Our Safety Evaluation Center is located in rural Northwestern New Jersey, approximately 50 miles from New York City, and provides a stimulating professional environment for over 20 D.V.M./Ph.D. scientists.

### **Director of Toxicology**

Supervise toxicology staff of 25 in the planning and conducting of preclinical pharmaceutical safety evaluation studies. Interaction with federal/international regulatory agencies and research/development groups. Doctorate in Toxicology or related science required with approximately 10 years of pharmaceutical experience, and significant contributions to scientific literature. Experience conducting preclinical safety evaluation studies and familiarity with drug safety, risk assessment, statistics, nutrition, pharmacokinetics and carcinogenesis essential. Board certification preferred.

### **Principal Scientist**

Conduct intramural safety assessment studies, supervise extramural studies/research, contribute to corporate-wide team management projects, supervise 3-6 technical staff, interact with pharmaceutical research/development projects. Doctorate in Toxicology or related science with 3-5 years pharmaceutical experience required. Familiarity with drug safety, risk assessment, statistics, pharmacokinetics and GLP's. Board certification preferred.

### **Senior Scientist**

Plan and monitor preclinical safety studies. Supervise 3-5 technical staff, interact with research/development projects. Doctorate in Toxicology or related science degree required. 0-3 years experience in post doctoral study or pharmaceutical preclinical safety assessment.

We provide a generous salary/benefits package. For prompt, confidential consideration, send resume to: **Louis DeMartino, Schering-Plough Research, 60 Orange Street, Bloomfield, NJ 07003.** We are an equal opportunity employer.

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# EMBL

The European Molecular Biology Laboratory, an international research organization situated in Heidelberg, West Germany, has the following vacancy:

## PROGRAMME COORDINATOR GENE EXPRESSION

The EMBL has at present 5 basic science programmes in Cell Biology, Differentiation, Gene Expression, Biological Structures and Biocomputing. Each programme contains between 7 and 10 independent research groups representing different background training. The programmes are focussed on one or two major topics. In 1990 a senior position as Coordinator for the Gene Expression Programme will become open and we are searching for an experienced scientist in molecular genetics at the full professor level preferably from any of the 14 member states of the EMBL: Austria, Denmark, Finland, France, Federal Republic of Germany, Greece, Israel, Italy, Netherlands, Norway, Spain, Sweden, Switzerland and the United Kingdom. It is expected that the Coordinator should lead his/her own research group and be instrumental in arranging collaboration within the Gene Expression Programme as well as bridge in between this programme and other basic science and instrumentation programmes at the EMBL.

We offer an above-average salary, plus certain allowances depending on personal circumstances.

Please send your C.V., bibliography and suggestions for referees to Dr. L. Philipson, EMBL, Postfach 10.2209, D-6900 Heidelberg, Federal Republic of Germany.



## DOW CHEMICAL U.S.A.

The Agricultural Products Department of Dow Chemical U.S.A. has immediate openings in HERBICIDE DISCOVERY RESEARCH. Successful candidates will join an interdisciplinary team of biochemists, plant physiologists and chemists and will participate in basic and applied research programs dedicated to the discovery of novel herbicidal molecules. Responsibilities include evaluation of potential herbicides by enzyme-based screening and characterization of enzyme inhibitor interaction through enzyme kinetic studies and ligand binding assays.

Candidates should have a MS or BS in biochemistry, molecular biology, plant physiology or related field. Experience in several of the following areas is required: protein purification, enzyme assays, chromatographic techniques (HPLC, FPLC), electrophoresis, immunoassays, and receptor binding methodology. Prior experience with radioisotopes and personal computers is desirable.

Parts of this expanding organization are currently located both in the San Francisco Bay Area and in Midland, Michigan. The laboratory will relocate in 1992 to newly constructed, state-of-the-art research facilities in the Indianapolis, Indiana area. Currently positions are available in California and Michigan.

Dow Chemical offers a salary and benefits package commensurate with experience and outstanding opportunities for career growth and advancement.

Qualified candidates may send their resume to Hugh West, Mgr., Human Resources, Dow Chemical U.S.A., P.O. Box 9002, Walnut Creek, CA 94598-0902. Dow Chemical is an equal opportunity employer.

Chemist

## PROJECT LEADER PROTEIN / HAPTEN CHEMISTRY

**Agri-Diagnostics Associates (ADA)**, a leader in the development and marketing of new biotechnology products for agricultural and environmental diagnostics markets, offers a new position of Project Leader - Protein/Hapten Chemistry.

The project leader will serve as lead scientist in a major start up effort to develop and validate unique immunoassays for small organic molecules such as pesticides and other environmental contaminants.

Requirements include a PhD in biochemistry or organic chemistry, working knowledge of HPLC/TLC/GC-MS and spectrophotometric techniques, experience in small molecule immunochemistry and molecular and macromolecular derivitization and characterization.

ADA, a joint venture of DNA Plant Technology and Koppers Corporation, offers an excellent compensation and benefits package. We are an exciting and growing organization located 15 minutes from Center City, Philadelphia. Please send your resume and salary history to:

**Human Resources**  
**AGRI-DIAGNOSTICS ASSOCIATES**  
2611 Branch Pike  
Cinnaminson, NJ 08077

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**1515 BROADWAY**  
**NEW YORK, N.Y. 10036**

# NATIONAL INSTITUTE OF MENTAL HEALTH ALCOHOL DRUG ABUSE AND MENTAL HEALTH ADMINISTRATION U.S. PUBLIC HEALTH SERVICE

## SUPERVISORY HEALTH SCIENTIST ADMINISTRATORS

The Division of Clinical Research has immediate openings for two supervisory health scientist administrators: Chief, Schizophrenia Research Branch (SRB), and Chief, Child and Adolescent Disorders Research Branch. The Branch Chiefs will be responsible for the scientific and administrative management of the branch as well as for the evaluation and development of the relevant research programs. The Branches support a broad range of research in their respective areas, through: grants, contracts, and cooperative agreements; research development; and research training activities. The Schizophrenia Research Branch has an annual budget of approximately \$33,000,000 and a staff of 14 people. The Child and Adolescent Disorders Research Branch has an annual budget of approximately \$20,000,000 and a staff of 6 people. A broad knowledge of the scientific fields represented by the Branch programs is essential for these positions.

Applicants should possess an M.D. or a Ph.D. degree, or equivalent training, in a discipline relevant to the particular discipline of the Branch, including basic biological, behavioral & neurosciences. In addition, applicants should have extensive experience in direct research as well as research administration in the field pertinent to the Branch. Each position may be filled through the Civil Service or through the Commissioned Corps of the Public Health Service. The salary range for these GM-15 positions is from \$57,158 to 75,500 per annum, and physicians may be eligible for an additional physicians comparability allowance of \$8,000 to \$20,000 per annum. Benefits include a retirement plan, health and life insurance, sick and annual leave. Relocation expenses may be paid. Duty station is Rockville, MD. U.S. citizenship is required.

Submit Applications of Federal Employment (SF-171) and Curriculum Vitae to: Ms. Benesch, Division of Personnel Management, Room 15C-12, 5600 Fishers Lane, Rockville, MD 20857, or call (301) 443-5407. Applications must be postmarked no later than July 15, 1989.

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## Infectious Diseases Research



The Department of Immunology and Infectious Diseases at Pfizer Central Research has a challenging position available in its antibiotics research and discovery group. You must have a PhD in Microbiology or Biochemistry and relevant postdoctoral training in antibacterial research. Previous experience in the discovery and development of new antimicrobials for medical use is highly desirable, but not essential. You will become part of a multidisciplinary project team involved in the discovery and development of agents with contemporary mechanisms of action for the treatment of infectious diseases. Duties will include establishing a laboratory, supervising assistant scientists and contributing to planning of research programs and the advancement of product candidates in the infectious diseases area.

In addition to a stimulating research environment and an excellent opportunity for professional recognition and advancement, we offer a competitive salary/benefits package and an opportunity to live in an attractive Connecticut shore community. Qualified applicants should submit their resume and references in confidence to: Dr. Jerry K. Larson, Assistant Director, Employee Resources, Pfizer Central Research, Eastern Point Road, Groton, Connecticut 06340. An equal opportunity employer.

National Cancer Institute  
National Institutes of Health,  
Public Health Service

## CANCER PREVENTION FELLOWSHIP PROGRAM

The Division of Cancer Prevention and Control (DCPC) is accepting applications for the Cancer Prevention Fellowship Program (CPFP). The purpose of this program is to attract individuals from a multiplicity of health science disciplines into the field of cancer prevention and control. The program provides for: Participation in the DCPC Cancer Prevention and Control Academic Course; Working at NCI directly with individual preceptors on cancer prevention and control projects; Brief assignments in cancer prevention and control programs at cancer centers, State Health Departments or other institutions. Funding permitting, ten Fellows will be accepted for up to three years of training, beginning July 1, 1990. Benefits include selected relocation and travel expenses, paid federal holidays, and participatory health insurance.

### ELIGIBILITY

1. M.D. or D.O. from a U.S., territorial, or Canadian Medical School. Foreign medical graduates must have current ECFMG/FMGEMS certification and one year residency in a training program approved by the Accreditation Council for Graduate Medical Education.
- OR
2. Ph.D., Dr. P.H. or other doctoral degree in a related discipline (epidemiology, biostatistics, biomedical, nutritional, public health or behavioral sciences). Foreign education must be comparable to that received in accredited U.S., territorial, or Canadian institutions.
3. U.S. citizenship or resident alien eligible for citizenship within four years.

For details and application packet send a **POSTCARD** with your name and home address to:

**Douglas L. Weed, M.D., Ph.D.**  
**Cancer Prevention Fellowship**  
**Program**  
**Division of Cancer Prevention and**  
**Control**  
**National Cancer Institute**  
**Executive Plaza South, T-41**  
**Bethesda, MD 20892**

Further inquiries: Mrs. Barbara Redding,  
(301) 496-8640 or 496-8641.

**DEADLINE FOR RECEIPT OF**  
**APPLICATIONS: SEPTEMBER 8, 1989.**



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## POSITIONS OPEN

**POSTDOCTORAL ASSOCIATE.** Perform research in the field of molecular and cellular immunology. Study the development of the repertoire of T cells in mice, investigate and evaluate functional and phenotypic heterogeneity of these cells using recombinant DNA and hybridoma technology. Requires a Ph.D. in chemistry/biochemistry or molecular biology. Also requires a strong background in organic chemistry as evidenced by at least three graduate level courses in the subject. Also requires proven expertise in enzyme purification, kinetics, immunochemistry, isolation and characterization of mRNA, in vitro translation and construction of cDNA library as evidenced by doctoral research in these disciplines. Monday to Friday, 9:00 a.m. to 5:00 p.m.; \$22,000 per annum. Please send résumé to: **Job Service Technical Unit, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109.** Refer to Job Order #3050014.

**POSTDOCTORAL FELLOWSHIP—COASTAL MARINE SCHOLAR:** The Marine Sciences Center is seeking a recent Ph.D. for a postdoctoral research position in any aspect of marine science, coastal zone management or related disciplines. Twenty-one months of stipend will be provided (\$26,000 for 12 months). Scholars are encouraged to pursue their own research interests and to contact potential faculty sponsors regarding supplementary support. Preference will be given to candidates whose interests overlap with those of the faculty. All requirements of Ph.D. must be completed by time of appointment. Submit résumé, detailed statement of research interests and three letters of recommendation by 15 July 1989 to: **Dr. Robert K. Cowen, Marine Sciences Research Center, SUNY Stony Brook, Stony Brook, NY 11794-5000.** SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer. AK 107.

### POSTDOCTORAL FELLOWSHIP MOLECULAR IMMUNOLOGY UNIVERSITY OF CALIFORNIA, SAN FRANCISCO (UCSF)

Ph.D. or M.D. position for 2 years, beginning on or after 1 September 1989. Molecular/cellular biology of lymphocyte receptors for neuropeptides. Defined cDNA clones, cell lines, and anti-receptor antibodies available for studies of receptor structure and function. Experience in molecular biology. Please send résumé and references to: **Professor Edward J. Goetzl, Division of Allergy and Immunology, UCSF, Room U-426, San Francisco, CA 94143-0724.**

### POSTDOCTORAL FELLOWSHIPS UNIVERSITY OF VIRGINIA BIODYNAMICS INSTITUTE

The Biodynamics Institute at the University of Virginia seeks postdoctoral fellows to investigate problems in biological timing within the nervous and endocrine systems. There are currently 10 Institute laboratories (Drs. G. D. Block, W. S. Evans, W. O. Friesen, M. L. Johnson, D. A. Leong, D. Mellon, M. Menaker, A. D. Rogol, M. O. Thorner and J. D. Veldhuis) which address a diverse set of issues including: cellular mechanisms underlying pulsatile release within the neuroendocrine system, neural basis of rhythmic motor behaviors, mathematical modeling of periodic data, environmental control of reproductive cycles and the physiological basis of circadian rhythmicity. For further information, send inquiry to: **Biodynamics Institute, Gilmer Hall, University of Virginia, Charlottesville, VA 22901** or directly to any of the members at this address, or call: **804-982-2157.** Equal Opportunity/Affirmative Action Employer.

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

**POSTDOCTORAL POSITION** available in plant molecular biology and biochemistry of amino acid biosynthesis in soybean. Background in enzyme purification or molecular biology desirable. Salary commensurate with experience (\$23,846 to \$34,580). Send curriculum vitae and names of three references to: **Dr. Benjamin F. Matthews, USDA-ARS, Plant Molecular Biology Laboratory, Building 006, Room 118, Beltsville, MD 20705.** Applications should be marked 9E007. An Affirmative Action/Equal Opportunity Employer.

## POSITIONS OPEN

### POSTDOCTORAL/INSTRUCTOR— DEPARTMENT OF ANATOMY

Ongoing active research program seeks developmental neurobiologist with interests in cytological, ultrastructural, immunocytochemical, culture studies on early neural and cutaneous differentiation. Teaching in one of the anatomical disciplines would be expected, commitment modest. Research program is one of several related active programs involving developmental neurobiology. Salary based on experience and productivity. Deadline for receipt of applications is 1 September 1989.

Please contact:

**Bryce L. Munger, M.D.**  
Department of Anatomy  
The Milton S. Hershey Medical Center  
The Pennsylvania State University  
P.O. Box 850  
Hershey, PA 17033  
Telephone: 717-531-8650

**POSTDOCTORAL POSITION AVAILABLE** to examine the neurophysiological and neuropharmacological selectivity of nociceptive and thermoreceptive spinothalamic tract neurons and relate these to their immunocytochemical and anatomical properties. Knowledge of quantitative single cell identification methods or the pharmacology of analgesia is desirable. Interested candidates are asked to send curriculum vitae and three references to: **Dr. A. D. Craig, Division of Neurobiology, Barrow Neurological Institute, St. Joseph's Hospital and Medical Center, 350 West Thomas Road, Phoenix, AZ 85013.** Equal Opportunity Employer.

**POSTDOCTORAL POSITION** is immediately available for 3 years to study the cellular and molecular basis for tissue damage associated with the inflammatory response [see *New Engl. J. Med.* 320, 365-376 (1989)]. Strong background in biochemistry, immunology, or cell biology essential. Send curriculum vitae and references to: **Dr. Stephen J. Weiss, University of Michigan Medical Center, Simpson Memorial Institute, Department of Internal Medicine, 102 Observatory Street, Ann Arbor, MI 48109.**

### POSTDOCTORAL POSITION

Available immediately, for computer studies of protein structure and folding. Applicant should have strong background in biophysical chemistry and computer programming. Starting salary \$20,000. Send curriculum vitae, statement of research interests, and names of three references to:

**Dr. George Rose**  
Department of Biological Chemistry  
The Milton S. Hershey Medical Center  
The Pennsylvania State University  
P.O. Box 850P  
Hershey, PA 17033

An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL POSITION** available beginning in the summer/fall of 1989 to study mammalian gene expression/DNA repair induced by DNA damage, and identification and isolation of genes involved in these processes. Applicants should have a Ph.D. and/or M.D. degree. Experience in molecular biology, protein biochemistry, and/or mammalian tissue culture is preferable. Send curriculum vitae, statement of research interests, relevant reprints, and the names and telephone numbers of three references to: **Dr. Kristoffer Valerie, Department of Radiation Oncology, Medical College of Virginia, Virginia Commonwealth University, MCV Station Box 58, Richmond, VA 23298-0058.** VCU/MCV is an Equal Employment Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

**POSTDOCTORAL POSITION—MYCOLOGIST** Ph.D. with training in mycology required for 2-year teaching and research position. Teach one class each semester. Potential research areas include soil and aquatic microbiology, V-A mycorrhizal fungi, biological control, physiology, and genetics. Send letter of application, résumé, transcripts and three letters of recommendation to: **Dr. Barton Baker, West Virginia University, Division of Plant and Soil Sciences, Morgantown, WV 26506-6108.** Applications accepted until position is filled.

## POSITIONS OPEN

**POSTDOCTORAL POSITION** in electrophysiology available immediately in established laboratory conducting research on (i) receptor-effector coupling and receptor expression in *Xenopus* oocytes and (ii) short- and long-term changes in synaptic efficiency in brain slices. Experience in intracellular electrophysiology or molecular biology techniques desirable. Competitive salary commensurate with experience. Send curriculum vitae and two letters of reference to: **E. M. Landau, M.D., Department of Psychiatry, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574.** An Equal Opportunity Employer.

### POSTDOCTORAL POSITION

Available immediately to investigate the regulation of immune function in swine exposed to various stressors. An earned Ph.D. degree in immunology, environmental physiology or endocrinology is preferred. Send curriculum vitae and names of three references to: **Dr. Gary Allee, Animal Sciences Department, S105 Animal Sciences Center, University of Missouri, Columbia, MO 65211.** Applications must be received by 16 June 1989 or until a suitable candidate is found.

**POSTDOCTORAL POSITION** to study recovery from brain injury. Currently investigating the effects of fetal brain transplants, neurotrophic factors, and pharmacological treatments on functional recovery. Experience with animal behavioral testing, stereotaxic surgery, and neuroanatomical/histological techniques required. Salary negotiable. Résumé and three letters of reference to: **Dr. Stein, Dean, Rutgers Graduate School, 360 King Boulevard, Newark, NJ 07102.** Telephone: 201-648-5834, fax: 201-648-1191.

**POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY.** The Department of Forest Science at Texas A&M University is requesting applications from investigators with a Ph.D. and a background in molecular biology and experience in prokaryotic and eukaryotic genetics. The individual will participate in a research program related to gene identification and regulation, in southern pines. Emphasis is on developing molecular approaches to understanding resistance factors in response to drought. Send curriculum vitae, transcripts and names of three references to: **Dr. R. J. Newton, Department of Forest Science, Texas A&M University, College Station, TX 77843-2135.** Telephone: 409-845-8279.

**POSTDOCTORAL POSITIONS** currently available to study the biochemistry and physiology of the 70-kD class of heat-shock proteins. This class of proteins includes the brain-uncoating ATPase, which dissociates clathrin from coated vesicles during endocytosis. The focus of the laboratory is on the characterization of the enzymatic properties of the 70-kD heat-shock proteins, in particular, the properties of the uncoating ATPase which we are presently cloning. Please send curriculum vitae and three letters of recommendation to: **Dr. Lois Greene, NIH, Building 3, Room B122, 9000 Rockville Pike, Bethesda, MD 20892;** or call for additional information on: **301-496-1228.** NIH is an Equal Opportunity Employer.

**POSTDOCTORAL POSITIONS** available in AIDS-related research and psychoneuroimmunology. Faculty: **Crnec, Laudenslager, Mrazek, Pennington, and Reite.** Applications accepted until all positions filled. Send curriculum vitae, goals statement, and three letters of reference to: **Program Director, UCHSC, Box C268R, 4200 East 9th Avenue, Denver, CO 80262.** Telephone: 303-270-7212. An Affirmative Action/Equal Opportunity Employer.

**POSTDOCTORAL RESEARCH ASSOCIATE** position is available in NCI-funded research to evaluate the potential for NMR spectroscopy and imaging to provide predictors of response to chemotherapeutic drugs. Applicants need a strong background in non-routine NMR or tumor (cellular) biology. Send a résumé and three references to: **Dr. Jeffrey L. Evelhoch, Wayne State University School of Medicine, MR Center, Harper Hospital, 3990 John R Road, Detroit, MI 48201.** Wayne State University is an Affirmative Action/Equal Opportunity Employer.



## • POSITION AVAILABLE •

**Director, Division of Basic Research  
National Institute on Alcohol Abuse and Alcoholism  
Alcohol, Drug Abuse, and Mental Health Administration  
Public Health Service • Department of Health and Human Services**

The Alcohol, Drug Abuse, and Mental Health Administration invites nominations and applications for the position of Director, Division of Basic Research.

This is a Senior Executive Service position in the career civil service, with an annual salary range of \$68,700 to \$74,900. Physicians may also be eligible for a Physician's Comparability Allowance of up to \$20,000 per year. The position is located in the National Institute on Alcohol Abuse and Alcoholism, Rockville, Maryland.

The Director, Division of Basic Research, plans and administers programs of basic research on the causes and diagnosis of alcohol abuse and alcoholism, including research in the neurosciences, biological, biochemical, behavioral, and pharmacological sciences primarily using research grants to medical schools, universities, and private organizations. The Director is responsible for the development of program plans and the formulation of budget requests, and reviews and approves program plans and justifications for each of the Branches and programs within the Division of Basic Research. The Director is responsible for the implementation of Institute policies within the Division and nationwide as they affect the research programs of the Division.

Minimum qualifications requirements include the following: a degree of Doctor of Medicine, Doctor of Osteopathy, or a bachelor's or higher degree in an academic field related to the health sciences pertinent to the work of the position. In addition, candidates should possess progres-

sively responsible experience in the scientific administration of basic research. Professional background and/or education must also include an extensive knowledge of research methodology, and a knowledge of one or more scientific disciplines that are relevant to research on alcohol abuse and alcoholism. Candidates must possess experience in the management of programs, demonstrating competence to assume leadership in planning, staffing, directing, coordinating and allocating resources, and other responsibilities associated with executive leadership of a major national program. All candidates must have had responsible professional experience at the senior level (GS-15 or equivalent).

Further information about the position and qualifications may be obtained by contacting Ms. Leslie Everheart at (301) 443-5030. Applications (Application for Federal Employment, SF 171) accompanied by a current curriculum vitae and bibliography should be submitted to Ms. Everheart at the Division of Personnel Management, Alcohol, Drug Abuse, and Mental Health Administration, 5600 Fishers Lane, Room 15C26, Rockville, Maryland 20857. Complete application material (including the SF 171) must be postmarked by July 21, 1989.

Applications from women and minority group members are especially solicited.

**The Alcohol, Drug Abuse, and Mental Health Administration is an Equal Opportunity Employer.**

## Senior Scientist



### **Apply Your Knowledge Of Chromogenic And Immunological Assays And Make A Significant Difference In Infectious Disease Research.**

Ortho Diagnostic Systems, Inc., a Johnson & Johnson Company, is known throughout the world for the development and manufacture of medical diagnostics, reagents, immunological and related products. We are currently seeking a Senior Scientist who shares our dedication in this field.

This position will utilize your working knowledge of chromogenic and immunological assays as you design, perform and analyze experiments in the area of hemostasis. You'll be expected to interact closely with departmental staff, supervise bench scientists and act as liaison with other departments. Excellent oral and written skills are necessary in order to communicate effectively as well as maintain accurate records and lab notebooks.

To qualify, you must have a PhD with 1-3 years' experience in Biochemistry, Clinical Chemistry, Physiology/Biology or a related field. Specific training in isolation of proteins or coagulation proteins and column chromatography, as well as experience with monoclonal antibodies, protein peptides or HPLC in developing immunoassays, is essential.

Our Raritan, NJ headquarters is conveniently located within an hour's drive of New York and Philadelphia. In addition to a very competitive salary, we offer the outstanding Johnson & Johnson benefits package, including dental plan, tuition reimbursement and an on-site Wellness Center. To help us continue to play a vital role in enhancing world health, send your resume, in confidence, to: Human Resources Dept. JC,



**Ortho Diagnostic Systems Inc.**  
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Box B, Raritan, NJ 08869.

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## Post Doctoral Research at The Wistar Institute

Post doctoral positions are available at The Wistar Institute for candidates with a strong background in molecular and cell biology, virology, immunology, genetics or protein chemistry. Specific areas of research include: human retroviruses; DNA/RNA tumor viruses; growth factors; oncogenes; pattern formation in embryos; molecular mechanisms involved in the immune response; x-ray crystallography of virus receptor interaction; and aging in tissue culture. The Wistar Institute is an independent institution, located on the campus of the University of Pennsylvania and is equipped with the latest biotechnology facilities.

Starting salary at \$20,000 a year. Interested applicants are requested to send a curriculum vitae and the names of 3 references to: **Coordinator of Research Training, THE WISTAR INSTITUTE, 36th and Spruce Streets, Philadelphia, PA 19104.** Equal opportunity employer, M/F.

THE  
WISTAR  
INSTITUTE



## CHAIR, PLANT BIOLOGY

The University of New Hampshire solicits applications and nominations for the position of Chair of the Department of Plant Biology in the College of Life Sciences and Agriculture from candidates presently at associate or full professor rank with earned doctorate in appropriate discipline. The new department will be formed in July, 1989 from a merger of botany and plant pathology and plant science (agronomy & horticulture). A productive research and teaching record and leadership skills appropriate for a 24-member department are important. Familiarity with the Land Grant philosophy is important. To apply, send *curriculum vitae* (non-citizens must include current visa status), *names/addresses/telephone numbers of four references*, *list of publications*, and *statement of academic and administrative philosophy*. Review of completed applications begins September 1, 1989. Submit to:

Dr. George O. Estes, Chair  
Plant Biology Search Committee  
125 Nesmith Hall  
University of New Hampshire  
Durham, New Hampshire 03824

Women and minorities encouraged to apply. UNH is an Affirmative Action/Equal Opportunity Employer.

UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL RESEARCH SERVICE  
PLUM ISLAND ANIMAL DISEASE CENTER  
MICROBIOLOGY LABORATORY  
GREENPORT, LONG ISLAND, NEW YORK

## RESEARCH ASSOCIATE VIRAL IMMUNOBIOLOGY & PATHOGENESIS

A postdoctoral Research Associate position is immediately available in the Microbiology Laboratory to study the immunology and pathogenesis of African Swine Fever Virus in suidae. Major research areas of interest include macrophage virus interactions, humoral and cellular immune recognition of viral determinants, and functions of neutrophils and myelopoiesis in acute infection and viral immunity. The lab operates on a fully funded program in the Agricultural Research Service, providing excellent operations support and equipment, and unique large animal biocontainment facilities. Appointment is for up to two years, and based on qualifications, is salaried at \$28,852 (GS-11) to \$34,580 (GS-12). The successful candidate must have a PhD in a relevant discipline. Individuals with research expertise in immunochemistry, macrophage physiology, cellular immunology, hemopoiesis and myelopoiesis, and virology are strongly encouraged to apply. Applicants should send a curriculum vitae, along with the names and corresponding addresses of three references to: **Dr. E. V. Genovesi, USDA, ARS, NAA, Plum Island Animal Disease Center, P.O. Box 848, Greenport, NY 11944.** For information call (516) 323-2500. Applications must be received by **August 1, 1989.**

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## Scientist

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For confidential consideration, please send your curriculum vitae to IGEN Inc., Human Resources Manager, 1530 East Jefferson Street, Rockville, MD 20852.

Informal inquiries about any of the above positions should be directed to Dr. Anthony R. Rees, Director of the Catalytic Antibody Program, at 301/984-8000.

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## POSITIONS OPEN

**POSTDOCTORAL POSITION:** A postdoctoral position is available immediately to study the role of receptors in mechanisms of chemical carcinogenesis. Background in one or several of the following areas required: neuropharmacology, neuroendocrinology, carcinogen metabolism, carcinogen-DNA-interactions. Experience with analytical procedures (HPLC, RIA) desired. Starting salary: \$17,250 plus benefits, 12-month full-time appointment, annual renewals required. Apply to: **Dr. H. M. Schuller, Experimental Oncology Laboratory, College of Veterinary Medicine, University of Tennessee, P.O. Box 1071, Knoxville, TN 37901-1071.** UTK is Equal Employment Opportunity/Affirmative Action/Title XI/Section 504 Employer.

**POSTDOCTORAL POSITIONS** available immediately in molecular and cellular biology in the laboratories of **Dr. Helene S. Smith** (genetic alterations in human breast cancer; background in molecular biology, biochemistry and genetics preferred) and **Dr. Brian R. Davis** (effect of HIV infection on hemopoiesis; background in molecular virology or hemopoiesis preferred). Send résumé, description of relevant experience, and names of three references to: **Ms. Louise Rohe-Stroschein, Geraldine Brush Cancer Research Institute, Medical Research Institute, 2200 Webster Street, San Francisco, CA 94115.** An Equal Opportunity/Affirmative Action Employer.

### POSTDOCTORAL RESEARCH ASSOCIATE

A position is available for an individual with a Ph.D. and/or M.D. and background in molecular biology to study genome structure, function, and evolution around the alpha-globin gene complex. The position, under the direction of **Nathan Fischel-Ghodsian, M.D.**, Director, Molecular Hematology, is in the Department of Pediatrics and the Medical Genetics Birth Defects Center at Cedars-Sinai Medical Center, both of which are under the directorship of **David L. Rimoim, M.D., Ph.D.** and are UCLA-affiliated teaching programs.

Interested individuals should send application to:

**Mark W. Schmitz  
Cedars-Sinai Medical Center  
Employee Relations Department  
8700 Beverly Boulevard  
Brown Building, 1st Floor  
Los Angeles, CA 90048**

### POSTDOCTORAL RESEARCH ASSOCIATE POPULATION ECOLOGY/ CONSERVATION BIOLOGY

Two-year postdoctoral position available to conduct research on population dynamics and population viability of the endangered red-cockaded woodpecker. The investigator will analyze long-term data of woodpecker fecundity, survivorship, and genetic variation to develop population viability assessments involving modeling population persistence in relation to demographic, environmental and genetic variability. The ideal candidate will have demonstrated research capability in population modeling and the skills and inclination to communicate effectively with faculty and students in diverse departments as well as conservation managers. Starting salary is \$28,852 and applicants must be available no later than 1 October 1989. Applications will be accepted until 1 July 1989. *USDA Forest Service is an Equal Opportunity Employer. Women and minorities are encouraged to apply.* Send curriculum vitae and the names of three references to: **M. R. Lennartz, USDA Forest Service, Department of Forestry, Clemson University, Clemson, SC 29634-1003.**

### USDA—AGRICULTURAL RESEARCH SERVICE (ARS) POSTDOCTORAL RESEARCH ASSOCIATE RESEARCH PHYSIOLOGIST

ARS is seeking a postdoctoral research associate/research physiologist to determine the site and mechanism of action of insulin-like growth factors and other neural peptides on modulation of growth hormone secretion from the pituitary gland. This is a 2-year position, with salary starting at \$28,852. Applicants must have received a relevant Ph.D. within the past 3 years. Send curriculum vitae and three references to: **Dr. C. Richard Barb, R. B. Russell Research Center, P.O. Box 5677, Athens, GA 30613.** Telephone: 404-546-3584. *USDA is an Equal Employment Opportunity Employer.*

## POSITIONS OPEN

### POSTDOCTORAL RESEARCH ASSOCIATE:

Full-time postdoctoral research position is immediately available in the Orthopedic Research Laboratory/Bowman Gray School of Medicine of Wake Forest University. Applicant should hold a Ph.D. and have background and experience in bacteria-biomaterial interface phenomena, adhesins, receptors, adhesive proteins, materials surfaces. Salary negotiable. Qualified candidates should send letter and résumé to: **Anthony G. Gristina, M.D., Section of Orthopedic Surgery, 300 South Hawthorne Road, Winston-Salem, NC 27103.** *Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL RESEARCH GENETICIST

position available, GS-11/12, U.S. Department of Agriculture, Agricultural Research Service. Objectives of research are to clone aflatoxin pathway genes. Refer to Announcement No. S-9-11 to apply and contact: **T. E. Cleveland, 504-286-4387** for further information. *The USDA-ARS is an Equal Opportunity Employer.*

### POSTDOCTORAL RESEARCH POSITIONS

available immediately in program investigating cell fusion and molecular genetics focused on vegetable crops. Two positions are open to study asymmetric protoplast fusions and analyses of somatic hybrid cells and plants, transformation, RFLP analysis or in situ hybridization. A recent Ph.D. in plant genetics is preferred. Applicants should send curriculum vitae and names of three references to: **Dr. K. C. Sink, Department of Horticulture, Michigan State University, East Lansing, MI 48824.** *MSU is an Equal Opportunity/Affirmative Action Employer.*

### PRESIDENT THE ROCKEFELLER UNIVERSITY

Applications are invited for the position of President, The Rockefeller University. An individual of international renown and outstanding scientific accomplishment is sought. Extensive management and administrative experience is preferred. Applications and inquiries should be addressed to: **The Search Committee, The Rockefeller University, 1230 York Avenue, New York, NY 10021.**

*The Rockefeller University is an Equal Opportunity/Affirmative Action Employer and does not discriminate in any of its employment policies or practices on the basis of race, color, religion, sex, national origin, handicap or status as a veteran.*

**PROFESSOR:** An individual is being sought for a tenure-track position in the Surgery Department at the University of Minnesota. This individual must have a M.D. or Ph.D. degree with a strong record of research accomplishment in transplantation immunology and an active interest and proven record in clinical research relating to his/her work. Individual will run an active basic research program including both cellular and molecular studies of transplantation immunogenetics/immunology and will interact with the clinical teaching programs in transplantation. Individual will be appointed to a named professorship and will be given a position in the Medical School commensurate with the appointment to a Chair. Applicants should submit curriculum vitae and bibliography by 31 July 1989 to: **Dr. Fritz Bach, Immunobiology Research Center, Department of Laboratory Medicine and Pathology, University of Minnesota, Box 724 UMHC, Minneapolis, MN 55417.** *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

**RESEARCH POSITION:** Applications are invited for a non-tenure position in the Department of Pathology, East Carolina University School of Medicine. Applicants must hold a Ph.D. or equivalent and must have had at least 4 years of postdoctoral research experience. They must have extensive experience in the analysis of mononuclear phagocyte function and differentiation. Expertise in the analysis of eicosanoid synthesis and the culture of hemopoietic progenitor cells is important. The position will require graduate-level teaching. Academic rank will be commensurate with experience. Please send curriculum vitae and names of at least three references to: **Dr. Alvin Volkman, Department of Pathology, East Carolina University, School of Medicine, Greenville, NC 27834.** *East Carolina is an Affirmative Action/Equal Opportunity Employer. Federal law requires proper documentation of identity and employability at the time of employment. It is requested that this documentation be included with curriculum vitae.* Applications should be received by 24 July 1989.

## POSITIONS OPEN

### PROFESSOR OF PHYSICAL OCEANOGRAPHY

The Department of the Scripps Institution of Oceanography at the University of California, San Diego (UCSD), invites applications for assistant, associate or full professor (tenure-track or tenured) positions in physical oceanography; rank and salary will be commensurate with qualifications and experience in accord with UC scales. At the time of appointment successful candidates must possess a Ph.D. degree in physical oceanography or a related science. Applications from junior scientists are encouraged. The position(s) will involve graduate teaching and supervision of graduate student research. Successful applicants will be expected to carry out a vigorous research program supported by extramural funds. Candidates at the associate or full professional level must show evidence of a strong research record. Assistant level candidates will be evaluated on their potential from their publication record and letters of recommendation, as appropriate to their level of experience. Send letter of application, including names of five references, to: **Chairman (PO), Graduate Department, A-008, Scripps Institution of Oceanography, UCSD, La Jolla, CA 92093.** Applications received after 1 August 1989 may not receive full consideration. *An Equal Opportunity/Affirmative Action Employer.*

### NATIONAL SCIENCE FOUNDATION (NSF)

NSF's Division of Biotic Systems and Resources is seeking qualified applicants for the position of **PROGRAM DIRECTOR, Ecosystem Studies Program.** The position will be filled on a rotational basis for 1 or 2 years, and is excepted from the competitive civil service. Salary ranges from \$48,592 to \$75,473 per annum. The incumbent to this position will administer a program for research support in mesoscale and comparative systems; this includes management and scientific oversight of large interdisciplinary projects, conducting site reviews of same, reviewing proposals, and other administrative duties.

Applicants should have a Ph.D. or equivalent experience in ecosystem studies. Résumés or SF-171, Application for Federal Employment, should be sent to: **National Science Foundation, 1800 G Street, NW, Room 208, Washington, DC 20550.** Attention: **Catherine Handle, Ann. No. EX 89-48.** For further information, call: 202-357-9529. Hearing-impaired individuals should call: TDD 202-357-7492. *NSF is an Equal Opportunity Employer.*

### RESEARCH ASSOCIATE

The Department of Surgery, University of Wisconsin-Madison Medical School, is recruiting a research associate/molecular biologist, Ph.D., with experience in site-directed mutagenesis, recombinant DNA, and cell culture. Project is to produce soluble HLA Class I gene products to study role of HLA in transplant rejection. Please send résumé to/or contact: **Dr. William J. Burlingham, Department of Surgery, University of Wisconsin Hospital, 600 Highland Avenue, Room F4/315 Clinical Science Center, Madison, WI 53792.** *The University of Wisconsin is an Affirmative Action/Equal Opportunity Employer.*

### UNIVERSITY OF OXFORD UNITED KINGDOM TEMPORARY UNIVERSITY LECTURESHIP IN HUMAN ANATOMY

A 1-year university lectureship is available in the Department of Human Anatomy starting 1 October 1989, or as soon thereafter as practical, as a replacement for **Dr. G. M. Morriss-Kay** during a period of research leave funded by Hoffmann-LaRoche. Subject to the availability of further funding, the post may be renewable for a further 1 or 2 years, but this will not be known until early 1990. Stipend will be according to age on the scale £9,865 to £20,615 (under review) per annum.

The lecturer will be expected to contribute to the pre-clinical teaching of medical students. Opportunities will be available to carry out research, for which good facilities are available.

Further information, including details of the research interests of members of the department, is available from: **Professor R. W. Guillery, F.R.S., Department of Human Anatomy, South Parks Road, Oxford, OX1 3QX,** to whom applications (six typed copies or one from overseas applicants), with full curriculum vitae, a summary of research interests and the name of three referees, should be sent by 23 June 1989.

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#### BioOrganic Chemistry

Responsible for the synthesis and characterization of hapten-carrier conjugates for immunoassay development. Requires a Ph.D. in Organic Chemistry or a related field and prior experience in the synthesis of immunogens and enzyme conjugates.

### SENIOR SCIENTIST

#### Product Development

Responsible for the development of immunoassay technology for environmental ligands. Requires a Ph.D. in Immunochimistry or a related field and immunoassay development experience. Familiarity with EIA/ELISA, immobilization chemistry, and affinity chromatography is desirable.

Forward resumes to: Dr. S. Friedman, EnSys Inc., P.O. Box 14063, Research Triangle Park, North Carolina 27709.

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## DEPARTMENT HEAD

### DEPARTMENT OF BIOCHEMISTRY

**T**he Roche Institute of Molecular Biology invites applications and nominations for Head—Department of Biochemistry. This department is one of four in the Institute: the others are Neurosciences, Cell and Developmental Biology and Molecular Oncology and Virology. When fully staffed, this department will consist of 9 independent investigators, 25 postdoctoral fellows and a support staff of approximately 15.

Applicants should have internationally recognized research programs in biochemistry and molecular biology. The major role of this individual is to carry on a vigorous and meritorious research program. This will be fully supported by the Institute, including laboratory assistants and several postdoctoral fellows. As Department Head, the individual will also be responsible for the administrative affairs of the Department. The position is ideally suited for a scientist whose primary goal is to carry out innovative research in a stimulating environment with minimal administrative duties and no grant or teaching responsibilities.

Our convenient location facilitates participation in New York City's rich cultural and intellectual life. Adjunct appointments at metropolitan area universities are encouraged. For consideration, please submit your *curriculum vitae* and bibliography, statement of research interests and names of three professional references, to: **Dr. Nathan Brot, Biochemistry Search Committee, Roche Institute of Molecular Biology, Nutley, New Jersey 07110.** We are an equal opportunity employer.

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## RESEARCH CHEMIST

(Molecular Immunologist)  
Biological Resources Branch  
National Institute of Allergy and  
Infectious Diseases  
National Institutes of Health

Position available immediately for qualified Research Chemist (Molecular Immunologist) to work in the Biological Resources Branch, NIAID, NIH. Candidate should be interested in studies on molecular mechanisms in immunology such as recognition/activation and antigen processing/presentation. Administrative duties include responsibility for peptide synthesis unit for which no experience is required. Support staff for research and peptide synthesis will be provided.

Salary: \$41,121 +

Qualified and interested candidates should send Curriculum Vitae, Application for Federal Employment (SF-171), and names and addresses of three (3) references to:

**John E. Coligan, Ph.D.**  
Chief, Biological Resources Branch  
NIAID, NIH  
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Bethesda, MD 20892  
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### UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY

**TENURE-TRACK POSITION** available for a Ph.D. or M.D. with interest in molecular biology of the immune system, particularly in the fields of regulation of gene expression and molecular genetics of lymphocyte receptors. The appointee is expected to establish an independent research program within an expanding academic department with research activities in molecular and cellular immunology, immunopathology of viral infections including HIV, and pathogenesis of rickettsial and parasitic diseases. Send curriculum vitae, description of research interest, and names and addresses of references to: **Dr. Jan Cerny, Department of Microbiology and Immunology, University of Maryland School of Medicine, 660 West Redwood Street, Baltimore, MD 21201.**

### UNIVERSITY OF MINNESOTA VICE PRESIDENT FOR INSTITUTE OF AGRICULTURE, FORESTRY AND HOME ECONOMICS AND DIRECTOR, AGRICULTURAL EXPERIMENT STATION

The University of Minnesota invites nominations and applications for the position of Vice President and Vice Provost for the Institute of Agriculture, Forestry and Home Economics (IAFHE) and Director of the Agricultural Experiment Station. The Vice President serves as the Chief Executive Officer of the Institute and as the Director of the Agricultural Experiment Station (AES).

Candidates for this position should meet the following requirements: an earned doctorate; a recognized record of productive research, teaching, and scholarly activity which merits appointment as a tenured professor in an academic department of the University; a demonstrated commitment to equal opportunity and affirmative action; a demonstrated commitment to the mission of a modern land-grant university; administrative and fiscal management experience, including research program administration, preferably in an academic institution; strong oral and written communication skills; the ability to develop and maintain effective relations with related units within the University, with private and federal research funding agencies, and with a diverse cross section of people from rural and urban Minnesota; and an ability to delegate and work effectively in a decentralized academic organizational structure.

Nominations must be postmarked by 30 June 1989; applications consisting of a letter expressing interest, curriculum vitae, and names and addresses of at least three references, must be postmarked by 21 July 1989. Send to: **Dr. P. T. Magee, Chair, Search Committee for the Vice President, Institute of Agriculture, Forestry and Home Economics, University of Minnesota, 428 Morrill Hall, 100 Church Street SE, Minneapolis, MN 55455.** The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

## POSITIONS OPEN

### TENURE/TENURE-TRACK FACULTY POSITIONS IN MOLECULAR PHARMACOLOGY THE UNIVERSITY OF MINNESOTA

Applications are invited for positions of Assistant Professor (tenure-track) in the Department of Pharmacology, Medical School. Successful candidates are expected to establish an outstanding independent research program in the area of molecular neuropharmacology and to participate in departmental teaching responsibilities. Requirements include a Ph.D. in pharmacology, biochemistry, cell biology or related field, or an M.D., and have 2 years of postdoctoral experience. Candidates with a strong research background and experience using recombinant DNA technology for studying pharmacological problems and molecular biology of the CNS are preferred. Applicants must have demonstrated involvement in quality research published in peer-reviewed journals.

Appointment as associate professor (tenured) may be considered for applicants with professional distinction in published research and ability to attract extramural grant support, and who have demonstrated effectiveness in teaching and advising.

Applicants should send curriculum vitae, significant reprints, a statement of research plans, and three names for reference purposes to: **Dr. J. W. Miller, Professor and Chairperson of Search Committee, Department of Pharmacology, 3-249 Millard Hall, University of Minnesota, 435 Delaware Street S.E., Minneapolis, MN 55455.** Deadline for receipt of applications is 31 August 1989.

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

### VICE PRESIDENT AND VICE PROVOST FOR THE HEALTH SCIENCES UNIVERSITY OF MINNESOTA

The University of Minnesota invites applications and nominations for the position of Vice President and Vice Provost for the Health Sciences (VPHS). The Vice President is a University central officer and the leading officer for the health sciences academic units on the Twin Cities Campus, the University Hospital and Clinic, and the School of Medicine on the Duluth Campus.

Candidates for this position should have the following attributes: a requisite terminal degree in a health sciences related field; qualifications that merit appointment as a tenured professor in an academic department within the health sciences; a distinguished record of scientific and administrative achievement in a health sciences field; a demonstrated commitment to research and instruction in the health sciences; an understanding of the political issues and processes necessary at state and federal levels to achieve success in obtaining fiscal support; a demonstrated commitment to affirmative action; effective communication and the interpersonal skills necessary to achieve the tasks outlined above; an appreciation of community concerns relating to health care issues; sensitivity to major issues confronting multidisciplinary health sciences units, and a willingness to work with the University Administration to effect their outcome.

Nominations must be postmarked by 30 June 1989; applications, consisting of a letter expressing interest, curriculum vitae, and names and addresses of at least three references, must be postmarked by 30 July 1989. Send to: **Richard S. Caldecott, Chair, Search Committee for Vice President for Health Sciences, University of Minnesota, 428 Morrill Hall, 100 Church Street SE, Minneapolis, MN 55455. Telephone: 612-624-9509.** The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

**WETLANDS ECOLOGISTS:** Duke University School of Forestry and Environmental Studies invites applications for two full-time research positions beginning 1 July 1989. Candidates should have a Ph.D. with postdoctoral experience preferred. One researcher will study cattail invasions in the Everglades. Another position focuses on phosphorus cycling in the Everglades. Send curriculum vitae, selected reprints, and at least three letters of recommendation to: **Dr. Curtis J. Richardson, Director Wetland Center, School of Forestry and Environmental Studies, Duke University, Durham, NC 27706.** Duke University is an Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN

### SYSTEMS ECOLOGIST

Oceanographic Research facility's Division of Applied Biology is seeking an experimentally oriented wetland estuarine ecologist with primary interests in production as related to mariculture and/or succession as it relates to environmental restoration. The position is open at assistant scientist level or higher. A current curriculum vitae, names of three references, and one to two pertinent publications should be sent to: **Dr. Kimon Bird, Harbor Branch Oceanographic Institution, Inc., Old Dixie Highway, Fort Pierce, FL 34946.** Opportunity Employer/Affirmative Action. Résumés will be accepted until 30 June 1989.

## RESEARCH GRANTS



**ALZHEIMER'S DISEASE RESEARCH GRANTS** applications are being accepted by the American Health Assistance Foundation. Grants are for 2 years, \$100,000 maximum per year, renewable. Deadline date: 31 October 1989. Write to:

**American Health Assistance Foundation  
Alice Massa, Research Grants Coordinator  
15825 Shady Grove Road, Suite 140  
Rockville, MD 20850**



**CORONARY HEART DISEASE RESEARCH GRANTS** applications are being accepted by the American Health Assistance Foundation. Grants are for 1 year, \$25,000 maximum, renewable. Deadline date: 31 October 1989. Write to:

**American Health Assistance Foundation  
Alice Massa, Research Grants Coordinator  
15825 Shady Grove Road, Suite 140  
Rockville, MD 20850**



**GLAUCOMA RESEARCH GRANTS** applications are being accepted by the American Health Assistance Foundation. Grants are for 1 year, \$25,000 maximum, renewable. Deadline date: 30 November 1989. Write to:

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15825 Shady Grove Road, Suite 140  
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Inquiries and requests for applications should be directed to:

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