

butions to the study of aphasia, apraxia, and human anatomy, to mention but a few topics of interest to him. In the present volume he and Albert Galaburda offer up another set of intriguing ideas on the biologic foundations of cerebral dominance.

Over the past 15 years there have been a number of reports concerning cerebral dominance in both humans and animals. Perhaps the most startling is the claim by Geschwind and Peter Behan, who discuss the subject in a paper in the book, that there is a higher incidence of autoimmune disorders, migraine, and dyslexia in the left-handed population. In their view, this constellation of seemingly unrelated syndromes have in common developmental processes in which hormones, and in particular testosterone, interact with cortical growth. The authors speculate that the pathology of the left-handed can give rise to superior skills of the sort controlled by the right brain, such as conceptualizing spatial relations, and they observe that there are more than twice as many left-handed architects and mathematicians as one would predict from the general population. Getting this far into correlative data reminds me that our only left-handed president out of 40 was Garfield.

The book contains a number of interesting chapters on how individual elements in the larger picture contribute to brain function. Thus, Fernando Nottebohm sketches his elegant studies on the influence hormones have on the development of bird song and ultimately on neurogenesis. Arnold Scheibel and Patricia Goldman-Rakic and Pasko Rakic examine different aspects of cortical development. Scheibel describes studies that show that the dendritic pattern in Broca's area is not set until the first years of life and Goldman-Rakic and Rakic report their findings about intrauterine influences on cortical projections.

There are many more chapters, including reviews by Marjorie LeMay, Frank Duffy and colleagues, Thomas Kemper, Victor Denenberg, Marian Diamond, Stanley Glick, and Raymond Shapiro, Ida Gerendai, and Charles E. Boklage. Cerebral dominance is an important topic, and many of the ideas put forth in the book are provocative. Though several of its claims are highly speculative, the book merits serious attention. It will remain for future research to determine whether Norman Geschwind left us with another major contribution.

MICHAEL S. GAZZANIGA  
Department of Neurology,  
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## Books Received

- Antarctic Ecology.** R. M. Laws, Ed. Academic Press, Orlando, Fla., 1984. Vol. 1. xviii, 344 pp., illus., + index. \$55. Vol. 2. xviii pp. + pp. 345-850, illus., + index. \$75.
- Applied Atomic Collision Physics.** Vol. 2, Plasmas. C. F. Barnett and M. F. A. Harrison, Eds. Academic Press, Orlando, Fla., 1984. xiv, 502 pp., illus. \$80.
- Artificial Intelligence.** V. M. Ponomarev, Ed. Published for the International Federation of Automatic Control by Pergamon, New York, 1984. xviii, 559 pp., illus. \$125. IFAC Proceedings Series (1984), no. 9. From a symposium, Leningrad, Oct. 1983.
- Asbestos. Medical and Legal Aspects.** Barry I. Castleman, with Stephen L. Berger, Law and Business (Harcourt Brace Jovanovich), Clifton, N.J., 1984. xx, 593 pp. \$60.
- Asymptotic Behavior of Mass and Spacetime Geometry.** Francis J. Flaherty, Ed. Springer-Verlag, New York, 1984. vi, 213 pp. Paper, \$10.50. Lecture Notes in Physics, vol. 202. From a conference, Corvallis, Ore., Oct. 1983.
- Atlantic Fisheries and Coastal Communities.** Fisheries Decision-Making Case Studies. Cynthia Lamson and Arthur J. Hanson, Eds. Dalhousie Ocean Studies Programme, Halifax, Nova Scotia, Canada, 1984 (distributor, Institute for Resource and Environmental Studies, Halifax). x, 252 pp., illus. Paper, \$18.50.
- Biomembranes. Dynamics and Biology.** Robert M. Burton and Francisco Carvalho Guerra, Eds. Plenum, New York, 1984. x, 415 pp., illus. \$52.50. NATO ASI Series A, vol. 76. From an institute, Provoa de Varzim, Portugal, June 1983.
- Bit by Bit. An Illustrated History of Computers.** Stan Augarten. Ticknor and Fields, New York, 1984. x, 324 pp. \$29.95; paper, \$17.95.
- Blood Vessels and Lymphatics in Organ Systems.** David I. Abramson and Philip B. Dobrin, Eds. Academic Press, Orlando, Fla., 1984. xx, 771 pp., illus. \$89.
- Career Mobility in a Corporate Hierarchy.** James E. Rosenbaum. Academic Press, Orlando, Fla., 1984. xx, 328 pp. \$36.50.
- Cariology Today.** B. Guggenheim, Ed. Karger, Basel, 1984. xii, 396 pp., illus. \$98.25. From a congress, Zurich, Sept. 1983.
- The Centipedes and Millipedes of Southern Africa.** A Guide. R. F. Lawrence. Balkema, Rotterdam, 1984. xii, 148 pp., illus. \$25.
- Chemical Mutagens. Principles and Methods for Their Detection.** Vol. 9. Frederick J. de Serres, Ed. Plenum, New York, 1984. xiv, 306 pp., illus. \$42.50.
- The Child's Entry into a Social World.** H. R. Schaffer. Academic Press, Orlando, Fla., 1984. x, 236 pp. \$25. Behavioural Development.
- Climatic Changes on a Yearly to Millennial Basis.** Geological, Historical and Instrumental Records. N.-A. Mörner and W. Karlén, Eds. Reidel, Boston, 1984 (distributor, Kluwer Boston, Hingham, Mass.). xviii, 667 pp., illus. \$79. From a symposium, Stockholm, May 1983.
- Current Issues in Toxicology.** Interpretation and Extrapolation of Chemical and Biological Carcinogenicity Data to Establish Human Safety Standards; The Use of Short-Term Tests for Mutagenicity and Carcinogenicity in Chemical Hazard Evaluation. H. C. Grice, Ed. Springer-Verlag, New York, 1984. x, 197 pp. Paper, \$18.50.
- Databases in Systematics.** R. Allkin and F. A. Bisby, Eds. Published for the Systematics Association by Academic Press, Orlando, Fla., 1984. xiv, 331 pp., illus. \$49.50. Systematics Association Special Volume, No. 26. From a symposium, Southampton, England, Dec. 1982.
- Energy and Agriculture.** G. Stanhill, Ed. Springer-Verlag, New York, 1984. xiv, 192 pp., illus. \$32.50. Advanced Series in Agricultural Sciences, 14. From a meeting, Kiryat Anavim, Israel, March 1983.
- Energy, Economics, and the Environment.** Russell Mills and Arun N. Toké, with Susan Mills. Prentice-Hall, Englewood Cliffs, N.J., 1985. xvi, 496 pp., illus. \$34.95.
- Energy Management and Control Systems Handbook.** F. William Payne. Fairmont, Atlanta, Ga., 1984. xii, 340 pp., illus. \$39.
- The Environmental Effects of Nuclear War.** Julius London and Gilbert F. White, Eds. Published for the American Association for the Advancement of Science by Westview, Boulder, Colo., 1984. xii, 204 pp., illus. Paper, \$24. AAAS Selected Symposia Series 98. From a symposium, Detroit, May 1983.
- Environmental Politics and Policy.** Walter A. Rosenbaum. Congressional Quarterly, Washington, D.C., 1984. x, 328 pp. Paper, \$10.50.
- Epidemiologic Reviews.** Vol. 6. Neal Nathanson et al., Eds. Johns Hopkins University School of Hygiene and Public Health, Baltimore, 1984. viii, 220 pp., illus. Paper, \$15.
- ERS-1 Radar Altimeter Data Products.** European Space Agency, Paris, 1984. viii, 259 pp., illus. Paper,

140 F. ESA SP-221. From a workshop, Frascati, Italy, May 1984.

**Estuarine Ecology of the Southeastern United States and Gulf of Mexico.** Robert R. Stickney. Texas A&M University Press, College Station, 1984. xiv, 310 pp., illus. \$24.50.

**Ethopharmacological Aggression Research.** Klaus A. Miczek, Menno R. Kruk, and Berend Olivier, Eds. Liss, New York, 1984. xii, 275 pp., illus. \$46. Progress in Clinical and Biological Research, vol. 167. From a symposium, Zeist, Netherlands, Sept. 1983.

**Fourth European IUE Conference.** (Rome, May 1984.) European Space Agency, Paris, 1984. xx, 518 pp., illus. Paper, 175 F. ESA SP-218.

**Fracture Mechanics Methodology.** Evaluation of Structural Components Integrity. George S. Sih and Luciano de Oliveira Faria, Eds. Nijhoff, The Hague, 1984 (U.S. distributor, Kluwer Boston, Hingham, Mass.). xiv, 177 pp., illus. \$45. Engineering Application of Fracture Mechanics. From a course, Lisbon, June 1981.

**Freshwater Biological Monitoring.** D. Pascoe and R. W. Edwards, Eds. Pergamon, New York, 1984. viii, 167 pp., illus. \$35. Advances in Water Pollution Control. From a conference, Cardiff, U.K., Sept. 1984.

**Friendships in Normal and Handicapped Children.** Tiffany Field, Jaipaul L. Roopnarine, and Marilyn Segal, Eds. Ablex, Norwood, N.J., 1984. xii, 227 pp. \$29.50. From a symposium, Miami.

**Frontiers in Gastrointestinal Cancer.** Bernard Levin and Robert H. Riddell, Eds. Elsevier, New York, 1984. xviii, 328 pp., illus. \$44.95. Current Oncology.

**Functionalism Historicized.** Essays on British Social Anthropology. George W. Stocking, Jr., Ed. University of Wisconsin Press, Madison, 1984. 245 pp., illus. \$19.95. History of Anthropology, vol. 2.

**Functions of the Basal Ganglia.** Pitman, London, 1984 (U.S. distributor, CIBA Pharmaceutical Co., Newark, N.J.). viii, 281 pp., illus. \$35. Ciba Foundation Symposium 107. From a symposium, London, Nov. 1983.

**Gaia. An Atlas of Planet Management.** Norman Myers, Ed. Anchor/Doubleday, Garden City, N.Y., 1984. 272 pp., illus. \$29.95; paper, \$17.95.

**Gemstone Enhancement.** Kurt Nassau. Butterworths, Boston, 1984. xiv, 221 pp., illus., + plates. \$34.95.

**Ion Exchange Technology.** D. Naden and M. Streat, Eds. Published for the Society of Chemical Industry by Horwood, Chichester, England, 1984 (U.S. distributor, Halsted [Wiley], New York). 742 pp., illus. \$110. From a conference, July 1984.

**Ion Implantation Science and Technology.** J. F. Ziegler, Ed. Academic Press, Orlando, Fla., 1984. xii, 635 pp., illus. \$55.

**Large-Scale Oceanographic Experiments and Satellites.** Catherine Gautier and Michèle Fieux, Eds. Reidel, Boston, 1984 (distributor, Kluwer Boston, Hingham, Mass.). x, 288 pp., illus. \$48. NATO ASI Series C, vol. 128. From a workshop, Sainte-Lucie de Porto-Vecchio, Corsica, Oct. 1983.

**The Limits of Scientific Reasoning.** David Faust. University of Minnesota Press, Minneapolis, 1984. xxviii, 199 pp. \$25; paper, \$12.95.

**Measuring the Benefits of Clean Air and Water.** Allen V. Kneese. Resources for the Future, Washington, D.C., 1984. xiv, 159 pp., illus. Paper, \$5.95.

**Medical Management of Endometriosis.** Jean-Pierre Raynaud, Tiit Ojasoo, and Luciano Martini, Eds. Raven, New York, 1984. xviii, 307 pp., illus. \$39.50. From a symposium, Cannes, Sept. 1983.

**Methods for the Study of Marine Benthos.** N. A. Holme and A. D. McIntyre, Eds. 2nd ed. Blackwell Scientific, Palo Alto, Calif., 1984. xii, 387 pp., illus. \$44.

**Methods in Radiative Transfer.** Wolfgang Kalkofen, Ed. Cambridge University Press, New York, 1984. viii, 450 pp., illus. \$49.50. From a meeting, Patras, Greece, 1982.

**Methods in Ring Theory.** F. van Oystaeyen, Ed. Reidel, Boston, 1984 (distributor, Kluwer Boston, Hingham, Mass.). viii, 576 pp. \$74. NATO ASI Series C, vol. 129. From an institute, Antwerp, Aug. 1983.

**Modeling Dynamic Phenomena in Molecular and Cellular Biology.** Lee A. Segel. Cambridge University Press, New York, 1984. xx, 300 pp., illus. \$49.50; paper, \$12.95.

**The Molecular Basis of Sex and Differentiation.** A Comparative Study of Evolution, Mechanism, and Control in Microorganisms. Milton H. Sailer and Gary R. Jacobson. Springer-Verlag, New York, 1984. xvi, 216 pp., illus. \$34.50.

**Molecular Biophysics of the Extracellular Matrix.** Struther Arnott, D. A. Rees, and E. R. Morris, Eds. Humana, Clifton, N.J., 1984. xii, 189 pp., illus. \$39.50. Molecular Biology and Biophysics.

**Molecular Quantum Electrodynamics.** An Introduction to Radiation-Molecule Interactions. D. P. Craig and T. Thirunamachandran. Academic Press,

(Continued on page 1371)

## BOOKS RECEIVED

(Continued from page 1332)

Orlando, Fla., 1984. xii, 324 pp., illus. \$58. Theoretical Chemistry, vol. 8.

**The Moment of Creation.** Big Bang Physics from before the First Millisecond to the Present Universe. James S. Trefil. Illustrations by Gloria Walters. Macmillan, New York, 1984. vi, 234 pp. Paper, \$6.95. Collier Books. Reprint, 1983 edition.

**Orbits for Amateurs with a Microcomputer.** D. Tattersfield. Halsted (Wiley), New York, 1984. xiv, 171 pp. \$29.95.

**Organic Chemicals in Natural Waters.** Applied Monitoring and Impact Assessment. James W. Moore and S. Ramamoorthy. Springer-Verlag, New York, 1984. xii, 289 pp., illus. \$39.80. Springer Series on Environmental Management.

**Osteoporosis.** C. Christiansen *et al.*, Eds. Glostrup Hospital Department of Clinical Chemistry, Glostrup, Denmark, 1984. Two volumes. 842 pp., illus. Dkr. 700. From a symposium, Copenhagen, June 1984.

**Palate Development.** Normal and Abnormal Cellular and Molecular Aspects. Ernest F. Zimmerman, Ed. Academic Press, Orlando, Fla., 1984. xiv, 251 pp., illus. \$48. Current Topics in Developmental Biology, vol. 19.

**Paleobotany.** Thomas N. Taylor and Edith L. Smoot, Eds. Van Nostrand Reinhold, New York, 1984. Two volumes. Part 1, Precambrian through Permian. xviii, 409 pp., illus. \$50. Part 2, Triassic through Pliocene. xvi, 364 pp., illus. \$45. Benchmark Papers in Systematic and Evolutionary Biology.

**Papers in Vertebrate Paleontology Honoring Robert Warren Wilson.** Robert M. Mengel, Ed. Carnegie Museum of Natural History, Pittsburgh, 1984. vi, 186 pp., illus. \$30; paper, \$22.50. Special Publication no. 9.

**A Passion to Know.** 20 Profiles in Science. Allen L. Hammond, Ed. Scribner, New York, 1984. xiv, 240 pp., illus. \$15.95. Reprinted from *Science* 80-84.

**Perspectives on Gulf Coast Prehistory.** Dave D. Davis, Ed. University Presses of Florida, Gainesville, 1984. xii, 379 pp., illus. \$24.50. Ripley P. Bullen Monographs in Anthropology and History, No. 5. From a conference, Avery Island, La., March 1981.

**Principles of Water Quality.** Thomas D. Waite, with J. E. Quon and Neil J. Freeman, Academic Press, Orlando, Fla., 1984. xii, 289 pp., illus. \$45. Water Resources and Water Quality Management.

**Probabilistic Methods in Structural Engineering.** Giuliano Augusti, Alessandro Baratta, and Fabio Casciati. Chapman and Hall, London, 1984 (U.S. distributor, Methuen, New York). xxvi, 556 pp., illus. \$90.

**Probability Without Tears.** Derek Rowntree. Scribner, New York, 1984. vi, 169 pp., illus. \$13.95.

**Psychological Aspects of Genetic Counselling.** Alan E. H. Emery and Ian M. Pullen, Eds. Academic Press, Orlando, Fla., 1984. x, 236 pp. \$32.

**Psychological Processes in Cognition and Personality.** Werner D. Froehlich *et al.*, Eds. Hemisphere, Washington, D.C., 1984. x, 284 pp., illus. \$47.95. The Series in Clinical and Community Psychology.

**Reproduction in Mammals.** Book 3, Hormonal Control of Reproduction. C. R. Austin and R. V. Short, Eds. Drawings by John R. Fuller. 2nd ed. Cambridge University Press, New York, 1984. xii, 244 pp., illus. \$39.95; paper, \$16.95.

**Structural Inorganic Chemistry.** A. F. Wells. 5th ed. Clarendon (Oxford University Press), New York, 1984. xxxii, 1382 pp., illus. \$98.

**Tests in Education.** A Book of Critical Reviews. Compiled by Philip Levy and Harvey Goldstein. Academic Press, Orlando, Fla., 1984. xxx, 718 pp. \$35.

**Theory and Research in Behavioral Pediatrics.** Vol. 2. Hiram E. Fitzgerald, Barry M. Lester, and Michael W. Yogman, Eds. Plenum, New York, 1984. xvi, 283 pp., illus. \$39.50.

**Theory in Psychopharmacology.** Vol. 2. S. J. Cooper, Ed. Academic Press, Orlando, Fla., 1983. x, 247 pp., illus. \$45.

**A Theory of Economic Systems.** Manuel Gottlieb. Academic Press, Orlando, Fla., 1984. xxiv, 451 pp. \$49.50. Studies in Social Discontinuity.

**Therapeutic Approaches to Myocardial Infarct Size Limitation.** David J. Hearse and Derek M. Yellon, Eds. Raven, New York, 1984. xvi, 255 pp., illus. \$42.

**Thermodynamic Properties of Nonelectrolyte Solutions.** William E. Acree, Jr. Academic Press, Orlando, Fla., 1984. x, 308 pp., illus. \$65.

**Thermodynamics.** William Z. Black and James G. Hartley. Harper and Row, New York, 1984. xxii, 755 pp., illus. \$40.50.

**Ultrasound Annual 1984.** Roger C. Sanders and Michael C. Hill, Eds. Raven, New York, 1984. x, 292 pp., illus. \$44.

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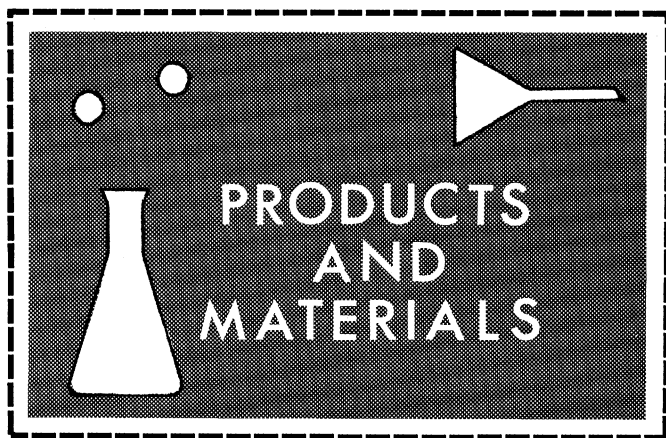
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### Literature

*Balances* describes the specifications and features of the AE and PE lines of laboratory balances and scales. Mettler Instrument. Circle 585.

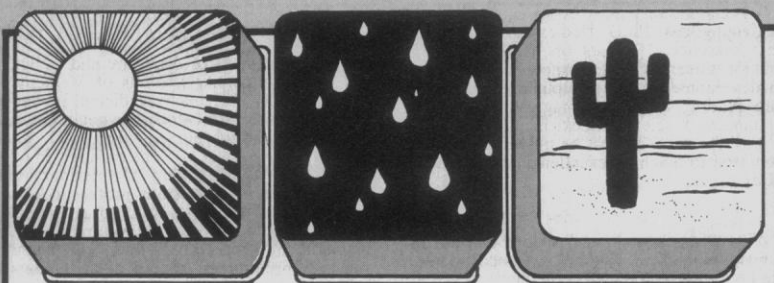
*Fermentors* lists ten major sources of fermentation equipment failure and how they are effectively countered in open frame equipment. New Brunswick Scientific. Circle 586.

*Separation Media and Equipment* describes a complete line of chemicals, instruments, fittings, and accessories for chromatography, electrophoresis, and cell separation. Pharmacia Fine Chemicals. Circle 588.

*HPLC* includes application chromatograms, technical information, and literature citation. Pierce Chemical. Circle 589.

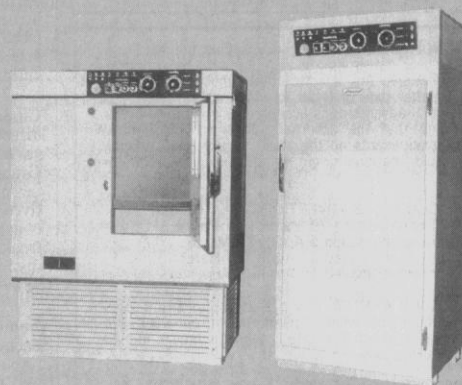
*Gel Electrophoresis Service* is devoted to a quantitative, two-dimensional protein database. This service provides assays for chemical, pharmaceutical, medical, and other scientific researchers. Protein Databases. Circle 590.

*Scientific and Engineering Software* features scientific word processing, graphics, data acquisition, data management, and statistical analysis. Scientific Software Products. Circle 591.



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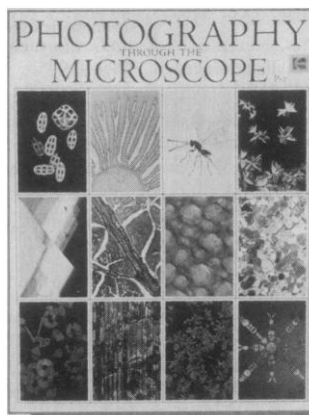
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Washington, D.C. 20005

## POSITIONS WANTED

**Anthropologist.** Recent Ph.D. Experience and publications in paleoanthropology (Neanderthals, Upper Palaeolithic, Middle Age), physical anthropology (nonmetric cranial traits), biometry (multivariate analysis), and archaeology (Palaeolithic, Mesolithic, petroarchaeology, aerial archaeology). References. Reply to: M. Toussaint, 53c Bois de Loë, 4580 Aubel, Belgium. X

**Biochemist/Cell Biologist.** Ph.D. 1976. Experienced in cellular metabolism, enzyme activity and hormonal regulation in vitro (cell suspension, broken cell system and tissue culture) and in vivo. Highly motivated and knowledgeable in analyzing, planning, and executing problems pertinent to regulation of cell activity and the mechanism of action thereof. Seeks position with academic/research institution. Box 65, SCIENCE. X

**Biochemist/Molecular Biologist/Policy Analyst, M.S., M.P.P.** Five years of experience in environmental and health policy analysis at the state and federal levels. Expertise in TSCA, FIFRA, and RCRA-related issues. Particular interest in decision-analysis. Multilingual. Seeks position doing science/environmental policy research with research-oriented consulting firm, nonprofit institute, or government. Box 63, SCIENCE. 3/15, 22

**Director of Field Station or Studies.** Ph.D. Mature individual with research, teaching, and administrative experience seeks permanent niche. Previous positions in academia, industry, and government. Appreciates essential role of field training in support of general programs. Box 62, SCIENCE. X

**Immunologist.** Ph.D. 1982. Experienced in clinical and research flow cytometry, monoclonal antibodies, cellular immunology, ELISA, and clinical laboratory management. Ten years of technical, pre- and postdoctoral experience at major cancer institutions. Box 68, SCIENCE. X

## POSITIONS WANTED

**Biologist/Geophysicist.** Ph.D. Dedicated teacher, innovative researcher, 15 years on faculty/research staff at major university. Experience in educational program development, interdisciplinary education, extramural funding, business management, and public understanding of science. Seeks faculty or administrative position with college or university of any size committed to teaching excellence, quality education. Box 67, SCIENCE. 3/15, 22

**Clinical Psychologist.** Ph.D., 1973. Ten years as director of small private clinic. Previous director of several hospital clinical psychology departments. Graduate level teaching experience. Seeking a senior position as staff clinician for corporate executives, private foundations (or as private clinical consultant to individuals) to provide diagnostic and treatment services for gifted persons in emotional distress. 9959 N.E. Roberts Road, Seattle, Wash. 98110. X

**Immunologist/Immunochemist.** Ph.D. (1977). Experienced in protein purification and characterization (including HPLC and PAGE), antibody production and purification (both polyclonal and monoclonal), development of radio- and immunoassays, in vivo and in vitro assays of immune function, leukocyte chemotaxis, radiolabeled ligand binding, solid-phase peptide synthesis. Excellent publications and references. Box 64, SCIENCE. X

**Microbiologist.** B.S. 1979. Experience in tissue culture, ELISA, FA microscopy, technical writing. Analytical and conscientious problem-solver. Four years of industrial experience. Instruct and supervise personnel also. Desires research or quality control position. Box 61, SCIENCE. X

**Pathotoxicologist.** B.V.Sc., Ph.D. Six years of experience in clinical and general toxicology, preparation of protocols, evaluation of toxicity reports, toxicology data management, and field investigations. Box 66, SCIENCE. Telephone: 319-386-6971 after 4 p.m. 3/15, 22, 29

**Ph.D. Microbiology.** 19 years of experience in teaching microbiology/immunology to medical and paramedical students and research; more than 40 publications. Seeks a position, temporary or tenure-track. Now available. Telephone: 415-283-7498. Address: 3276 Marlene Drive, Lafayette, Calif. 94549. X

## POSITIONS OPEN

### ANALYTICAL INSTRUMENT DESIGN AT PERKIN-ELMER

Perkin-Elmer, a world leader in analytical instruments, has openings in instrument design at their Applied Science Division in Pomona, California. Candidates with mass spectrometer or related instrument design experience will have exciting opportunities in medical, industrial, military, and space applications.

Please contact: **Dr. Albert Tomassian, Manager, Analytical Instrument Development, Perkin-Elmer, Applied Science Division, 2771 North Garey Avenue, Pomona, Calif. 91767.** Or telephone: 714-593-3581.

*An Equal Opportunity/Affirmative Action Employer*

### PERKIN-ELMER

### ASSISTANT PROFESSOR OF BIOENGINEERING

The Department of Bioengineering at the University of Pennsylvania is searching for qualified applicants to fill a projected tenure-track position at the assistant professor level in the area of instrumentation and biomedical sensors. The department is part of the School of Engineering and Applied Science, and maintains academic programs at the bachelor, master's, and doctorate level. Applicants must have a Ph.D. or equivalent degree in engineering or physical science, and must be qualified to teach both undergraduate and graduate engineering courses, and are expected to participate in ongoing research as well as initiate their own research programs. Address inquiries and send résumé to:

**Dr. Mitchell Litt, Chairman  
Department of Bioengineering  
University of Pennsylvania  
285 Towne Building, D-3  
Philadelphia, Pa. 19104**

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

## POSITIONS OPEN

### ANATOMY AND CELL BIOLOGY POSITION

The Department of Anatomy and Cellular Biology, Tufts University Schools of Medicine, Dental Medicine and Veterinary Medicine, invites applications for a tenure-track position beginning July 1985. Applicants should possess the Ph.D. and/or the D.V.M. (or equivalent). The position involves participation in the teaching of veterinary histology. Applicants at the assistant professor level should have at least 2 years of postdoctoral research experience and show promise of developing an active and independent research program; some teaching experience is preferable. Applicants at the associate or full professor level must have an active, funded research program and histology teaching experience. Major research areas in the department include cell/developmental biology, reproductive biology and neuroendocrinology, and muscle biology. We especially seek candidates who utilize molecular biological approaches in research related to these major programmatic areas. Salary and rank are dependent upon qualifications and experience. Applicants are invited to submit curriculum vitae, names of three references, and a letter describing research and teaching interests to: **Dr. Karen R. Hitchcock, Chairman, Department of Anatomy and Cellular Biology, Tufts University Schools of Medicine, Dental Medicine and Veterinary Medicine, 136 Harrison Avenue, Boston, Massachusetts 02111.** Deadline for receipt of applications is 30 April 1985.

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

**ANIMAL PHYSIOLOGY—**Tenure-track assistant professorship with responsibilities in both undergraduate and graduate physiology curricula. Expectation of development of active, independent research program in field of expertise; excitable cell (sensory, neuromuscular) or gastrointestinal physiology preferred. Ph.D. in a biological science required, postdoctoral experience anticipated for the successful applicant. Please submit letter of application (including description of research and teaching interests), curriculum vitae, and three letters of reference by 31 March 1985 to: **Dr. Peter L. Starkweather, Chairman, Department of Biological Sciences, University of Nevada, Las Vegas, Las Vegas, Nevada 89154.** *The University of Nevada is an Affirmative Action/Equal Opportunity Employer.*

**ASSISTANT PROFESSOR—DEVELOPMENTAL BIOLOGY.** Rutgers, The State University of New Jersey, is recruiting for its Newark campus a person to establish a research program in a molecularly oriented area of developmental biology. The successful candidate will be encouraged to interact with a newly formed Neuroscience Center on campus.

**ASSISTANT PROFESSOR—MOLECULAR GENETICS.** This is an anticipated position. The successful candidate will be expected to develop a research program in some aspect of either eukaryotic or prokaryotic molecular genetics.

These are tenure-track positions carrying a light teaching load commensurate with a major research effort. Candidates should have at least 2 years of postdoctoral experience. We anticipate a 1 September 1985 starting date for both positions.

Candidates should send curriculum vitae, a brief statement of research plans, and three letters of recommendation to:

**Dr. David Kafkewitz, Chairman  
Biology Search Committee  
Department of Zoology and Physiology  
Rutgers University  
Newark, New Jersey 07102**

Application deadline: 15 April 1985.

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

### BIOCHEMISTRY FACULTY POSITION RICE UNIVERSITY

The Department of Biochemistry at Rice University invites applications for a faculty position at the level of assistant professor. Clear distinction in creative research and education are essential requirements. Preference will be shown to candidates in the fields of molecular and cellular biology; however, applications are encouraged from all outstanding candidates irrespective of their fields of interest. Send résumé, a brief outline of future research plans, and the names of three references to: **J. S. Olson, Chairman, Department of Biochemistry, Rice University, P.O. Box 1892, Houston, Texas 77251.** *Rice University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**ASSISTANT/ASSOCIATE PROFESSOR**—The Department of Fisheries and Wildlife at Utah State University has a tenure-track position for a person with expertise in the area of vertebrate population dynamics, and exploitation theory and application. Duties of the position which is jointly funded by the department and the Ecology Center include teaching an undergraduate course in general ecology, a senior/graduate level course in management of fish and wildlife populations, and a graduate level course in the selected area of expertise; developing and maintaining a research program which will attract extramural funding; advising undergraduate and graduate students, and participating in departmental programs. Applicants must have Ph.D. in fisheries, wildlife, ecology, or a closely related field. Salary negotiable and competitive. Send letter of application, curriculum vitae, and three letters of reference no later than 20 May 1985 to: **Dr. Michael Wolfe, Chairman, Search Committee, Department of Fisheries and Wildlife, College of Natural Resources, Utah State University-UMC 52, Logan, Utah 84322. An Affirmative Action/Equal Opportunity Employer.**

### ASSISTANT PROFESSOR The Ohio State University

The Department of Agronomy is seeking a scientist to establish a productive research program in the molecular genetics of crop plants. Interaction with applied plant breeders and development of a graduate level course are expected. Send résumé and three or more references to: **Dr. S. K. St. Martin, Department of Agronomy, Ohio State University, Kottman Hall, 2021 Coffey Road, Columbus, Ohio 43210, by 15 April 1985. An Equal Opportunity/Affirmative Action Employer.**

The Division of Hematology-Oncology, Department of Internal Medicine, at University of Cincinnati College of Medicine invites applications for a tenure-track position at the level of **ASSISTANT OR ASSOCIATE PROFESSOR**. M.D., Ph.D., or M.D.-Ph.D. degrees acceptable. Applicants are expected to have expertise in the general area of molecular biology of neoplasia including viral oncogenesis, recombinant DNA technology, and gene cloning.

A major portion of time would be devoted to research but M.D.'s may spend 10 to 20 percent of time in clinical activities. Applicants are expected to develop an independent and competitive research program in the field as part of a general plan of the division to create a strong research program in oncologic basic research. Collaboration with local basic scientists is available and expected. Salary commensurate with experience. Interested candidates should apply to: **O. J. Martelo, M.D., Hematology-Oncology Division, 231 Bethesda Avenue, Cincinnati, Ohio 45267. Telephone: 513-872-4233. Affirmative Action/Equal Opportunity Employer.**

**ASSISTANT PROFESSOR**—The Department of Psychology at Queen's University seeks applicants for a 1-year replacement position during the 1985-1986 academic year with a possible 1-year extension. Candidates should have a Ph.D. degree in the general field of perception or sensory psychology and be willing to teach an advanced perception course and conduct independent research in this field. *Canadian citizens and landed immigrants will be given first preference; males and females will be equally considered.* Applicants should send curriculum vitae, reprints, and names of references along with a statement of areas of interest to: **Barrie J. Frost, Ph.D., Chairman, Search Committee, Department of Psychology, Queen's University, Kingston, Ontario, Canada K7L 3N6.**

**Utah State University.** The Department of Biology is seeking an animal physiologist at the **ASSISTANT/ASSOCIATE PROFESSOR** level (tenure-track) to develop a teaching and research program on a 9-month contract beginning 1 September. Candidates must have strong interests in teaching elementary human physiology and an upper division/graduate course. The candidate should be a neurobiologist. An interest in neuroendocrinology will be given a high priority. The development of a vigorous funded research program will be expected. **QUALIFICATIONS:** Ph.D. degree. Candidate with experience beyond the Ph.D. degree will be given preference. Rank and salary commensurate with experience. Send curriculum vitae with publication list, a summary of teaching and research experience, and three letters of reference by 1 April 1985 to: **Dr. Raymond T. Sanders, Chairman, Search Committee, Biology Department, UMC-53, Utah State University, Logan, Utah 84322. An Affirmative Action/Equal Opportunity Employer.**

## POSITIONS OPEN

**ASSISTANT PROFESSOR—EVOLUTIONARY BOTANY/PALYNOLOGY.** Tenure-track position available 16 August 1985. Ph.D. required; preference to applicants with postdoctoral research experience in pre-Quaternary palynology and/or paleobotany. The successful candidate will be expected to establish a vigorous research program and direct graduate students. Teaching responsibilities may include core botany and specialty areas. Send curriculum vitae, statement of research interests, and three letters of recommendation to: **Dr. Stan R. Szarek, Department of Botany and Microbiology, Arizona State University, Tempe, Ariz. 85287, by 15 April 1985. An Equal Opportunity/Affirmative Action Employer.**

**ASSISTANT PROFESSOR, Immunology**—Position available in the Department of Surgery, UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY (UMDNJ)—RUTGERS MEDICAL SCHOOL, for a Ph.D. with research experience in cellular immunology. Candidate will be expected to pursue independent, grant-supportable research and collaborate in on-going programs in infectious and tumor immunology. Salary competitive and negotiable. Submit curriculum vitae, statement of research interest, and three references to: **Ralph S. Greco, M.D., Professor and Chief, Section of General Surgery, UMDNJ-Rutgers Medical School, CN 19, New Brunswick, N.J. 08903. An Equal Opportunity/Affirmative Action Employer, M/F/H/V.**

The Department of Microbiology/Immunology, Oral Roberts University School of Medicine, invites applications for an **ASSISTANT PROFESSOR OF IMMUNOLOGY**. Applicants must have a Ph.D. in immunology or microbiology and postdoctoral experience is desirable. Responsibilities include teaching immunology to medical, dental, and graduate students and having an active research program. Send curriculum vitae and the names and addresses of three references to: **Dr. Richard Gilmore, Associate Dean for Biomedical Sciences, Oral Roberts University School of Medicine, Tulsa, Okla. 74170. Oral Roberts University is a Christian ministry that employs without regard to race, color, sex, age, handicap, national origin, or status as a veteran.**

**ASSISTANT PROFESSOR:** The Department of Physiology and Biophysics, University of Arkansas for Medical Sciences, invites applications for a full-time, tenure-track position in **NEUROPHYSIOLOGY**. Candidates must possess either a Ph.D. or M.D. degree and have had at least 2 years of postdoctoral research experience. The successful candidate will be expected to develop a research program supported by extramural funding and participate in the teaching of neuroscience and neurophysiology to medical and graduate students. Send curriculum vitae, statement of research interests, and three names for references by 15 April 1985 to: **Lawrence E. Cornett, Ph.D., Department of Physiology and Biophysics, Slot 505, University of Arkansas for Medical Sciences, 4301 West Markham Street, Little Rock, Arkansas 72205.**

*University of Arkansas for Medical Sciences is an Affirmative Action/Equal Opportunity Employer.*

### CELLULAR IMMUNOLOGIST

The Department of Microbiology and Environmental Health, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, announces a national search for a **veterinary immunologist**. This is a regular appointment at the assistant or associate professor level. The salary is open. Candidates for the position should be interested in joining a multidisciplinary interdepartmental group dedicated to excellence in teaching, research, and service. The applicant will be expected to develop an active research program in immunology. Specific teaching duties will include lecture and laboratory presentations for undergraduate and graduate microbiology students, and/or professional veterinary medicine students. Applicants should have a Ph.D. and/or D.V.M. degree, or equivalent, and research training in cellular immunology. Postdoctoral research experience is desirable. The candidate should have the ability to pursue independent research in cellular immunology. The closing date of 15 April 1985 may be extended. Employment to begin by 20 August 1985. Applications should include curriculum vitae, statement of personal goals and objectives, and three letters of reference. Applications and inquiries should be directed to: **Dr. Robert P. Ellis, Chairman of Search Committee, Department of Microbiology and Environmental Health, Colorado State University, Fort Collins, Colorado 80523.**

*An Equal Opportunity/Affirmative Action Employer*

## MARINE SCIENTISTS

The Louisiana Universities Marine Center, a major new coastal laboratory for research and education, will open during summer 1985, under operation by the Louisiana Universities Marine Consortium (LUMCON), an organization of the state universities. Located in Cocodrie, near Houma, Louisiana, the Marine Center includes over 26,000 square feet of modern laboratories and will be served by two new research vessels, including a 32-m ocean-going vessel. LUMCON is seeking applications for as many as five openings for **assistant/associate scientists** to be filled between July 1985 and February 1986. These are permanent, state-supported positions. Primary duties are research but faculty affiliations with member universities are expected. Applicants must have a Ph.D. degree and, preferably, postdoctoral experience. Successful candidates are expected to develop an active, independent research program and to cooperate in the development of multidisciplinary programs. More experienced applicants may also be considered for a part-time position in research administration.

Marine scientists in any of the following disciplines are encouraged to apply, but the specific areas mentioned are of special interest: **MARINE SEDIMENTARY PROCESSES:** dynamics of fine sediments, effects of currents and waves, coastal wetlands, riverine influences. **COASTAL PHYSICAL OCEANOGRAPHY:** continental shelf and estuarine processes. **MARINE GEOCHEMISTRY:** riverine influences, sediment-water exchange, biologically important materials. **PHYTOPLANKTON ECOLOGY:** production, nutrient relationships, effects of grazing. **FISHERIES BIOLOGY:** life history and culture of commercially important species, particularly finfish, experimental studies. **MARINE TOXICOLOGY:** effects of pollutants on marine organisms, fate of organic contaminants in ecosystems.

Send letter of application, statement of research interests, curriculum vitae, and names of three references before 10 April 1985 to: **Dr. Donald F. Boesch, Director, Louisiana Universities Marine Consortium, Chauvin, La. 70344. An Affirmative Action/Equal Opportunity Employer.**

The Climate Research Group/Ocean Research Division and the California Space Institute at Scripps Institution of Oceanography (SIO) announce a **POSTDOCTORAL OR CAREER ENTRY LEVEL POSITION** offering the opportunity to carry out a research program on climate with emphasis on the use of satellite data, in association with members of the faculty and research staff at SIO. Particular interest areas include large-scale air-sea interactions and cloud effect on climate.

A strong background at the Ph.D. level (or equivalent) in fields such as applied mathematics, physics, chemistry, meteorology, or physical oceanography is required. Specific education or experience in climatology or climate research is not a requirement. Instead, appointee must have a solid education in the fundamentals of physical science and a strong interest in climate problems.

Facilities available include extensive climate data collections, access to computers and laboratory resources. The SIO Climate Research Group has been designated by the NOAA as the nation's first experimental climate forecast center. The SIO California Space Institute provides satellite data processing and analysis capabilities and the SIO Satellite Remote Sensing Facility provides access to satellite data. The climate research interests of Scripps scientists span a wide range, and the appointee will have considerable latitude in selecting and carrying out a research program.

Private foundation funding limits award to U.S. citizens. Initial appointment for 2 years with possibility of extension contingent on available funds. Salary range: \$19,212 to \$32,200 (commensurate with qualifications). Submit résumé with a minimum of three references before 1 May 1985 to: **Elaine Cox, Administrative Analyst, Ocean Research Division (S) A030, SIO, La Jolla, Calif. 92093. Telephone: 619-452-6363. University of California is an Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

**ASSISTANT PROFESSOR—MICROBIOLOGIST/VIROLOGIST.** Tenure-track position, research and teaching, available 15 August 1985. Applicant must have Ph.D. and at least 1 year of postdoctoral experience in animal host-parasite relationships, such as bacterial, viral, or protozoan pathogens of man. The successful candidate will be expected to establish an active research program and participate in undergraduate and graduate teaching. Send curriculum vitae and recent reprints, and have three referees send letters of reference by 15 April 1985 to: **Dr. Henry C. Reeves, Department of Botany and Microbiology, Arizona State University, Tempe, Ariz. 85287.** *Arizona State University is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT/ASSOCIATE PROFESSOR, MICROSCOPIST—GENETICIST.** Tenure-track position available August 1985. Responsibilities include participation in the undergraduate and graduate biology curriculum, including electron microscopy, genetics, and genetic engineering. Research and supervision of M.S. students expected. Closing date: 1 April 1985 or until filled. Submit letter of application, résumé, official transcripts, and three letters of reference to: **Biology Search Committee, Division of Science and Mathematics, New Mexico Highlands University, Las Vegas, New Mexico 87701.** *New Mexico Highlands University is a small, state-supported university and is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT PROFESSOR OF PLANT PATHOLOGY.** Tenure-track position to begin 21 August 1985 in molecular genetics of organisms associated with plant diseases; 80 percent research and 20 percent graduate-level teaching. Ph.D. in a biological science required with strong background in molecular genetics; postdoctoral experience preferred. Research interests could encompass any group of organisms important in plant pathology; special consideration may be given to applicants intending to develop research program on genetics of fungi. Salary commensurate with experience. Application deadline: 30 April 1985 or until a suitable candidate is found. Applications must include transcripts, résumé, three letters of reference, and a statement of future research interests. Send to: **R. E. Ford, Head, Department of Plant Pathology, University of Illinois at Urbana-Champaign, N-519 Turner Hall, 1102 South Goodwin Avenue, Urbana, Ill. 61801.** Telephone: 217-333-3170. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

**ASSOCIATE RESEARCH BIOCHEMIST.** The University of California in San Francisco (UCSF) is searching for a Ph.D. in physiology or biochemistry with extensive knowledge of tumor biology of exocrine pancreas and intestine. Candidates should have a strong background in immunology, cellular or molecular biology, or biochemistry. Ability to write research grant applications and scientific articles is essential. Send curriculum vitae and a list of three references to: **Young S. Kim, M.D., G.I. Research Laboratory, VA Medical Center, 4150 Clement Street, San Francisco, Calif. 94121.** *UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

### BIOMEDICAL ENGINEER B.S., M.S., or Ph.D.

Eastern manufacturer seeks a biomedical engineer for new product development and project management. Experience in respiratory therapy, anesthesiology, pulmonary function, or allied is preferred. We offer an excellent salary, many attractive benefits, and full paid relocation expenses to the East. To arrange a local interview, send résumé to: **Box 300, 1800 Market Street, San Francisco, Calif. 94102,** or telephone: 800-421-8889, 9 a.m. to 5 p.m., PST, or in California: 800-282-4888, **William E. Hunter.**

The **BIOLOGY DEPARTMENT** is recruiting for a tenure-track position in **molecular biology.** The candidate should have additional training in one or more of the following: microbiology, immunology, molecular genetics, and tissue culture. Assignments will include upper-division undergraduate and graduate courses in molecular biology and upper-division courses in one or more of the areas mentioned. Candidate will assist in administration of a Human Cytogenetic Technology Program. The department supports research involving graduates and undergraduates. Send curriculum vitae, letter of application, and three reference letters to: **Dr. Gus McCarthy, Chairman, Department of Biology, California State University-Dominguez Hills, Carson, Calif. 90747.** Application deadline is 15 April 1985. *An Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### ASSISTANT RESEARCH SCIENTIST

Applications from academic or industrial molecular biologists or biochemists are invited for a hard-money, long-term collaborative research position in an active molecular biology/cell surfaces group studying DNA, membrane receptors, and hemotropic bacteria. Responsibilities include associate directorship of the Laboratory for Cloning and Gene Transfer. Fully equipped medical school research environment, including Applied Biosystems DNA synthesizer, protein sequencer, and peptide synthesizer. Salary range: \$25,000 to \$28,000. Send curriculum vitae and names of three references to: **Garret Ihler, Head, Department of Medical Biochemistry and Genetics, College of Medicine, Texas A&M University, College Station, Texas 77843-1112.** *Equal Opportunity through Affirmative Action*

**BOTANY/PLANT ECOLOGY.** Assistant professor, Ph.D., beginning September 1985. Tenure-track position to teach introductory biology, plant biology, and ecology. Broad background required in plant biology including strong and diverse laboratory experience and research interests in population ecology. Horticultural experience desirable. Appointment subject to anticipated vacancy. Strong commitment to teaching in liberal arts college required. Applications, transcripts, résumés, and three letters of reference to: **Leonard DiLillo, Dean, Centre College, Danville, Kentucky 40422.** *Equal Opportunity Employer.*

### CELL BIOLOGIST

The University of North Carolina at Chapel Hill invites applications for a junior or senior faculty position in the Department of Anatomy and Laboratories for Cell Biology. Applicants should have postdoctoral research experience and demonstrated excellence in any area of cell biology. Preference will be given to research in cell surface or membrane biology, cellular neurobiology, or biology of the cytoskeleton. Teaching responsibilities will be in human gross anatomy, medical histology, or neurobiology. *Women and minorities are encouraged to voluntarily identify themselves.* Send curriculum vitae, a brief description of research plans, and the names of three references to: **Dr. Charles Hackenbrock, Chairman, Department of Anatomy, School of Medicine, 108 Swing Building 217H, University of North Carolina at Chapel Hill, Chapel Hill, N.C. 27514,** by 1 May 1985. *An Equal Opportunity/Affirmative Action Employer.*

The Department of Physical Medicine and Rehabilitation, University of Michigan Medical School, invites applications for a **CLINICAL RESEARCH POSITION.** Candidates will be doctorally trained with postdoctoral research experience in neuromuscular disease. This position will also include the teaching of PM&R house officers, medical students, and fellows in research techniques. Candidates will possess experience in operating a research laboratory. Previous work experience in an academic institution desirable. Salary and academic appointment appropriate to experience and training. Position available September 1985. Send curriculum vitae to: **Theodore M. Cole, M.D., Chairman, Department of Physical Medicine and Rehabilitation, E3118 University Hospitals, 1405 East Ann Street, Ann Arbor, Mich. 48109-0010.** *The University of Michigan is a nondiscriminatory, Affirmative Action Employer.*

**DIRECTOR OF THE NATURALIST SOCIETY,** an established non-profit foundation. Edit and create publications, and direct expansion of Society. Doctorate preferable, but not required. New approach to science, technology, and religion. For FREE copy of 400-page basic book describing tenets, and so forth, write to: **Dr. B. B. Stoller, P.O. Box 1339, Santa Cruz, Calif. 95061.**

**CENTER FOR EARTH AND ENVIRONMENTAL SCIENCE, STATE UNIVERSITY OF NEW YORK, PLATTSBURGH.** One-year faculty replacement position in **ECOLOGY.** Assistant professor. Ph.D. required. To start 1 September 1985. To teach ecology, systems and community ecology, and seminar in environmental science on main and satellite campus. Teaching excellence required. Closing date for receipt of application, résumé, and three recommendation letters is 1 April 1985 or until qualified candidate is found. Send materials to: **Mayerlyn Miller, Director of Personnel and Affirmative Action, Box 246, State University of New York, Plattsburgh, N.Y. 12901.** *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### BIOCHEMIST

Two tenure-track positions are available to replace retiring faculty in the Department of Chemistry at the University of Toledo. Applications are solicited from outstanding candidates with research interests in any area of biochemistry. Candidates should have demonstrated exceptional research ability and must be prepared to initiate and pursue an independent, quality research program. Dedication to excellence in teaching at the undergraduate and graduate levels is required. Postdoctoral experience is desirable. Applicants should send curriculum vitae, publications list, and research plans, and arrange for three letters of recommendation to be sent to: **Chairman, Faculty Search Committee, Department of Chemistry, The University of Toledo, Toledo, Ohio 43606.** The closing date for receipt of applications is 22 April 1985. *The University of Toledo is an Affirmative Action/Equal Opportunity Employer.*

**CHAIRPERSON,** Department of Medical Allied Health Professions (DMAHP), School of Medicine, University of North Carolina at Chapel Hill (UNC-CH). To provide dynamic leadership in teaching, research, and service in a department of seven divisions: Physical Therapy, Occupational Therapy, Medical Technology, Rehabilitation Counseling, Cytotechnology, Radiological Science, and Speech and Hearing Sciences. Candidate should have either an M.D. or Ph.D., and experience sufficient to give direction to programs offering graduate and undergraduate degrees. Must be qualified for senior faculty appointment. Nominations and applications should be received by: **The Search Committee for the Chairperson of the DMAHP, Office of the Dean, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, N.C. 27514,** no later than 1 May 1985. *Women and minorities are encouraged to identify themselves voluntarily. UNC-CH is an Equal Opportunity/Affirmative Action Employer.*

### CHAIRPERSON UNIVERSITY OF FLORIDA FRUIT CROPS DEPARTMENT

Applications are invited for the position of **professor and chairperson.** Candidates should have a Ph.D. in a related area of plant science, an established research program, and a commitment to excellence in extension and teaching. The department has 19 faculty members, encompassing research from applied to highly fundamental areas, and active programs in teaching and extension. Applications, including curriculum vitae and names of three references, should be sent by 15 April 1985 to: **Dr. T. E. Crocker, Fruit Crops Department, University of Florida, Gainesville, Fla. 32611;** telephone: 904-392-1658.

**DEAN,** University of New England, College of Osteopathic Medicine (UNECOM). Responsibilities include faculty development, financial management, promotion of academic excellence, and institutional liaison. A candidate must be a doctor of osteopathic medicine. The ideal candidate will have significant experience in medical education and administration. Position is available 1 July 1985. Applications should be received by 1 May 1985. Please forward letter of application, curriculum vitae, and names and addresses of three references to: **Dr. Gene Yonuschot, Chairperson, UNECOM Dean Search Committee, University of New England, 11 Hills Beach Road, Biddeford, Maine 04005.** *UNE is an Equal Opportunity/Affirmative Action Employer.*

**DIRECTOR OF TRANSPLANT IMMUNOLOGY—** Montefiore Medical Center/Albert Einstein College of Medicine seeks M.D. or Ph.D. with experience to direct large clinical transplant immunology laboratory program. Interests in clinical investigation and immune monitoring preferred. Opportunity exists for independent and collaborative research with multidisciplinary group. We offer an excellent salary and benefits package. Contact: **Dr. Frank Veith, Department of Surgery (telephone: 212-920-4108), Montefiore Medical Center, 111 East 210 Street, Box 900, Bronx, New York 10467.** *Equal Opportunity Employer, M/F.*

**ENVIRONMENTAL CHEMIST—**Laboratory directorship available immediately. Ph.D. in biology, chemistry, or related field required. Experience with EPA methods in wet chemistry, AA, GC; ability to maintain strict QA/QC program necessary. Salary commensurate with experience. Send résumé, transcripts, names of three references, and salary history to: **Dr. B. J. Zimmer, JANS Laboratory Inc., 69 South Street, Auburn, N.Y. 13021.**

## The Henkel Group Biotechnology Start-up: Your Opportunity To Make An Impact!

If you are highly motivated, desire a challenging and rewarding career, come join our growing staff of professionals. Henkel Corporation and Henkel KGaA are large international manufacturers of organic specialty products. Our new Molecular Genetics Department is located at our U.S. research facility in Minneapolis.

Several positions are available for talented Ph.D. scientists in the following areas of expertise:

### Molecular Biology

Successful candidates will have experience in two or more of the following areas: cDNA cloning, procaryotic molecular genetics, eucaryotic gene expression, *in vitro* mutagenesis, DNA sequencing and synthesis.

### Microbiology

Successful candidates will have a Ph.D. in Microbiology/Bacteriology and postdoctoral experience with microorganisms from unique environments.

### Enzymology

Successful candidates will have a Ph.D. in Biochemistry or related field, 2-4 years postdoctoral and experience in contemporary protein isolation and characterization approaches.

Scientists with industrial experience are encouraged to apply.

For confidential consideration, send your resume, references, plus salary requirements to:

Carol Sullivan  
Personnel Manager



2010 E. Hennepin Avenue  
Minneapolis, MN  
55413-2799

An Equal Opportunity Employer

## Opportunities in Diabetes Research



An equal opportunity employer

Pfizer Central Research is seeking professionals to fill several positions within a multidisciplinary team engaged in the discovery and development of new drug therapies for the treatment of diabetes.

Positions require either an MS degree or BS with additional postgraduate laboratory experience in the biological sciences. Preference will be given to applicants who can demonstrate a wide range of biochemical and/or physiological skills, with particular emphasis being placed on one or more of the following techniques: enzyme characterization and assay, protein purification, tissue culture and isolated cell preparation techniques, radioimmunoassay, receptor binding, HPLC and other analytical procedures, as well as isolated organ or whole animal studies.

In addition to the potential for career growth, these positions provide opportunities for motivated individuals to contribute to all levels of experimental work in a stimulating professional environment. We offer an excellent salary/benefits package plus an attractive southeastern Connecticut shore location. Qualified applicants should submit resume, including summary of research accomplishments, to: Mr. Charles P. Norris, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.

## PEPTIDE/BIOTECHNOLOGY RESEARCH

The Upjohn Company has an opening in its expanding Biopolymer Chemistry unit for a synthetic organic chemist to work in Peptide Synthesis. We seek a skilled scientist to assist with the solution and solid phase synthesis of peptides, synthetic methods development, purification of peptides by aqueous and not-aqueous chromatographic procedures (LPLC and HPLC, standard column chromatography), and characterization by TLC, HPLC, NMR, amino acid analysis and other appropriate methods.

The successful candidate will have a BS or MS degree in chemistry and will assist other scientists in developing new leads for therapeutic application to a variety of disease areas. Skills in summarizing and writing data are also required.

Kalamazoo is a medium-sized southwestern Michigan community with immediate access to a mix of excellent cultural, educational, and recreational pursuits, including numerous lakes and a four-season climate. Upjohn offers an excellent salary commensurate with experience and an outstanding benefits program.

For confidential consideration, please call from outside Michigan, TOLL FREE, 1-800-253-8600, extension 3-6767; or call from Michigan, COLLECT, 616-323-6767 to request an application. Please refer to Ad Number 17371-B when calling.



**A century of caring**

An Equal Opportunity Employer M/F



## POSITIONS OPEN

### DEVELOPMENTAL BIOLOGIST AND BIOCHEMIST

Two tenure-track faculty positions are available September 1985 or later; Ph.D. and college teaching experience required; rank and salary commensurate with experience. Appointees are expected to pursue active research programs involving undergraduate students and attracting external support. Commitment to teaching excellence in a liberal arts atmosphere is essential.

**Developmental Biologists** working with animal and/or plant systems, preferably with research experience in cellular, molecular, or genetic approaches to studying problems in development and differentiation, should apply. Teaching responsibilities will include a laboratory course in developmental biology and appropriate courses from among the following: cell biology, comparative anatomy, instrumentation, health studies, or general biology.

**Biochemist** is sought for a new, joint position in the Departments of Biology and Chemistry to establish a modern, interdisciplinary biochemistry program and teach courses in biochemistry and related areas (for example, kinetics, biophysics, toxicology, immunology, or instrumentation).

Review of applications will begin 12 April 1985. Send credentials, including three letters of reference, to: **Search Committee, Dow Science Office, Alma College, Alma, Michigan 48801.** *As an Equal Opportunity/Affirmative Action Employer, Alma College encourages women and minority candidates to apply.*

### ENVIRONMENTAL EPIDEMIOLOGIST/TOXICOLOGIST

Excellent management opportunity in environmental health for M.D. or Ph.D. with degree in toxicology or epidemiology. Requires 3 to 5 years of experience conducting epidemiology studies of environmental health hazards and their potential impact on human health. Will serve as project director of interdisciplinary teams composed of research scientists, epidemiologists, and other technical specialists assembled to study specific problems. Salary range: \$45,000 to \$52,000 (super-range available for physicians with an appropriate medical specialty or Board eligibility). If interested, send a résumé to: **Raymond W. Thron, Ph.D., Minnesota Department of Health, 717 Delaware Street, SE, Box 9441, Minneapolis, Minnesota 55440, or telephone: 612-623-5320.**

### ENVIRONMENTAL POLICY RESEARCH

Tenure-track position in Science and Public Policy Program, with joint appointment in either the Department of Civil Engineering/Environmental Science or the Department of Zoology. Salary open; preferred rank is assistant or associate professor. Duties to begin in August 1985. Job requirements include completed Ph.D., commitment to team-oriented research environment, and substantive expertise in environmental sciences, natural resources, or systems ecology. Candidates with experience or demonstrated interest in applied policy analysis are preferred. Job responsibilities include policy research, teaching, and service. Send curriculum vitae and three letters of reference to: **Steve Ballard, Science and Public Policy Program, 601 Elm Avenue, Room 431, University of Oklahoma, Norman, Oklahoma 73019.** Deadline is 15 April 1985.

*An Equal Opportunity/Affirmative Action Employer*

### FACULTY POSITION IN EPIDEMIOLOGY

University of Rochester  
School of Medicine and Dentistry

The Department of Preventive, Family and Rehabilitation Medicine is seeking to fill a tenure-track position at the level of assistant professor. The successful candidate would be expected to initiate research and to participate in the teaching of epidemiology to medical students and M.S. students in community health. Experience in chronic disease epidemiology, with special interests in aging, prevention, long term care, and psychosocial factors, is preferred. Candidates should have a doctoral degree in epidemiology with 1 to 2 years of postdoctoral experience or an M.D./Ph.D. Salary negotiable. Send curriculum vitae to:

**Stephen J. Kunitz, M.D.,  
University of Rochester  
School of Medicine and Dentistry, Box 644  
601 Elmwood Avenue  
Rochester, N.Y. 14642**

*Equal Opportunity Employer, M/F*

## POSITIONS OPEN

**DIRECTOR OF IMMUNO-PARASITOLOGY.** Applications are invited for a faculty position of assistant professor in residence and director of immunoparasitology in the Department of Medicine at the University of California at San Francisco (UCSF) to be on site at the VA Medical Center. Applicant's duties will include direction of an immunological research project in gastroenterology and teaching undergraduate (medical students) and graduate (postdoctoral fellows and M.D.'s) in the areas of immunology, gastroenterology, and experimental pathology. Applicants therefore should have in-depth experience in immunology and gastroenterology and should preferably have obtained a research degree in addition to an M.D. degree. Curriculum vitae should be sent to: **Dr. Marvin Sleisenger, Veteran's Administration Medical Center, 4150 Clement Street (111), San Francisco, Calif. 94121.** *UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

**AMHERST COLLEGE—VISITING FACULTY.** Position available for a Ph.D. chemist beginning September 1985. Appointment can be for 1 or 2 years, and is highly suited to someone on sabbatical. Since the college seeks the best available candidate for this nontenure-track position, rank and salary are open. The successful applicant will carry the normal teaching load at Amherst and will be encouraged to carry out either collaborative or independent research. Preference is for a physical chemist, but persons in other areas will be considered. Applications should be filed by 15 April 1985. Submit detailed résumé and names of references to: **Chairman, Chemistry Department, Amherst College, Amherst, Mass. 01002.** *Amherst College is an Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITION

The Department of Pharmacology and Toxicology of Rutgers College of Pharmacy is searching for a distinguished scientist at the full professor level to play a key role in the Joint Graduate Program in Toxicology. The Ph.D. or M.D. must have an outstanding record of research accomplishment; current grant support is required. Candidates with research programs in biochemical toxicology of mitochondrial effects of toxic agents and effects of toxic agents on nucleic acid metabolism will be preferred. The individual should be an experienced lecturer in biochemistry and pathology and have a record of successful direction of graduate research teaching, preferably in the areas of carcinogenesis and molecular biology. The deadline for accepting applications is 15 April 1985. Curriculum vitae should be sent to: **Dr. Robert Snyder, Chairman, Department of Pharmacology and Toxicology, Rutgers College of Pharmacy, P.O. Box 789, Piscataway, N.J. 08854.** *Equal Opportunity/Affirmative Action Employer.*

### SABBATICAL LEAVE REPLACEMENT

Hobart and William Smith Colleges seek a **GEOLOGIST OR GEOPHYSICIST** for the 1985/1986 academic year to teach both introductory and advanced-level courses. The position requires someone with broad interests. *Women and minorities are encouraged to apply.* Deadline for applications: 31 March 1985. Contact: **Donald L. Woodrow, Department of Geoscience, Hobart and William Smith Colleges, Geneva, N.Y. 14456.** Telephone: 315-789-5500, extension 215.

### MARINE BIOCHEMIST/TOXICOLOGIST

The Chesapeake Biological Laboratory (CBL) at Solomons, Maryland, a unit of the Center for Environmental and Estuarine Studies of the University of Maryland, is seeking a marine biochemist/toxicologist with interests in the biochemical and molecular effects of toxic substances on the physiology of marine organisms. Candidates should have research experience, a sound publication record, and be eager to participate in graduate education. This is a tenure-track, research-oriented faculty position, with rank dependent on qualifications. Applicants should include a statement of present and future goals, curriculum vitae, a list of major publications, and the names of five potential references. Materials should be addressed to: **Dr. C. F. D'Elia, Chairman, Search Committee, CBL, Solomons, Maryland 20688.** Applications received by 1 May 1985 will be assured of full consideration.

*The University of Maryland is an Equal Opportunity Institution with respect to both education and employment.*

## POSITIONS OPEN

**IMMUNOCHEMIST/BIOCHEMIST.** Postdoctoral position open immediately to study role of antigen in immunoregulation. Experience desirable in basic immunochimistry, nucleic acids sequencing, cell and membrane isolation procedures. Send curriculum vitae and names of two references to: **Dr. Justine S. Garvey, 606 Biological Research Laboratories, Syracuse University, Syracuse, N.Y. 13210.** *Affirmative Action/Equal Opportunity Employer.*

The Department of Chemistry of The University of Chicago invites applications for the position of **LECTURER IN ORGANIC CHEMISTRY.** This nontenure-track academic position will carry responsibility for the management and supervision of the undergraduate organic chemistry laboratories. It is expected that this person (with a Ph.D. in organic chemistry) will take an active part in the design of laboratory curriculum and experiments.

Qualified applicants should submit curriculum vitae and publication list, and should arrange for two or more letters of recommendation to be sent to:

**Professor Donald H. Levy  
Chairman, Department of Chemistry  
The University of Chicago  
5735 South Ellis Avenue  
Chicago, Illinois 60637**

*An Equal Opportunity/Affirmative Action Employer*

**VISITING LECTURER, Developmental Psychology.** One-year appointment to teach two courses each semester in cognitive and social development from infancy through adolescence, and pursue own research. Doctoral-granting department with active developmental program. Send curriculum vitae and three letters of reference by 1 April 1985 to: **Dr. Herbert Wells, Department of Psychology, University of North Carolina, Greensboro, N.C. 27412.** *An Equal Opportunity Employer.*

### MAMMOLOGIST

Associate curator of mammalogy and head of Department of Mammalogy. Ph.D. with curatorial and research experience in mammalian systematics; familiarity with administrative duties. Curatorial duties in a world mammal collection, gallery development, systematic research, and a 3-year commitment to administration for a staff of 10, possibility of a university teaching cross appointment. Salary commensurate with qualifications and experience. Appointment begins 1 July 1985. Curriculum vitae, research plans, reprints of publications, and letters from three referees should be sent to: **Dr. David W. Barr, Associate Director-Curatorial, Royal Ontario Museum, Toronto, Ontario, Canada M5S 2C6,** by 15 April 1985. *In accordance with Canadian immigration requirements, this advertisement is directed, in the first instance, to Canadian citizens and permanent residents. All applications, however, are encouraged.*

**MICROBIOLOGY—**Tenure-track assistant professorship with responsibilities in undergraduate general microbiology and immunology curricula with opportunity to enhance graduate training options in the field. Expectation of development of active, independent research program in area of expertise; specific research interest open, but broad experience in molecular biology or biological chemistry preferred. Ph.D. in a biological science required, postdoctoral experience anticipated for the successful applicant. Please submit letter of application (including description of research and teaching interests), curriculum vitae, and three letters of reference by 31 March 1985 to: **Dr. Peter L. Starkweather, Chairman, Department of Biological Sciences, University of Nevada-Las Vegas, Las Vegas, Nevada 89154.** *The University of Nevada-Las Vegas, is an Affirmative Action/Equal Opportunity Employer.*

### MOLECULAR BIOLOGIST

Seattle area research faculty has postdoctoral fellowship position for an individual with Ph.D. in molecular virology and a degree in veterinary medicine. Individual will be working on bovine leukemia research project, attempting to understand and define the mechanism(s) underlying cancer in animals. Genetic engineering, recombinant DNA, and other techniques will be used to define the structure, function, and perhaps the evolution of animal cancer genes. Incumbent of this 40-hour-per-week position will be paid at \$1289 per month. Send résumé to:

**Employment Security Department  
Employment Service Division  
9th and Columbia, KG-11  
Job Order Number 888748  
Olympia, Wash. 98504**

## CHEMICAL MARKETING

Sigma Chemical Company, a world-wide producer and distributor of research chemicals, has an immediate opening for a Technical Writer in the Catalog Department. This position requires an advanced degree in Chemistry or Biochemistry and at least three years of experience in one or more of the following areas: Technical Writing, Scientific Editing, Chemical Production or Quality Control. Limited travel will be required.

The successful applicant should be a self-starter and must have proven skills in both verbal and written communication in a "hands on" environment. Some knowledge of the printing or advertising industry is a definite plus. Full company benefits. Please send resume to:

**Personnel Manager**  
**SIGMA CHEMICAL**  
**COMPANY**  
3050 Spruce  
St. Louis, Missouri 63103

*An Equal Opportunity Employer, M/F*

## Anticipated Position

### Director Coastal Ecology Institute Louisiana State University (LSU)

LSU is seeking a director for its Coastal Ecology Institute, a major research division of the university's Center for Wetland Resources. A staff of 25, including 10 Ph.D.'s, 6 of whom are tenured, are employed by the Institute. They are involved in interdisciplinary research focusing on Louisiana's coastal zone but also including a broad range of theoretical and applied projects addressing environmental issues at the regional, national, and international scales.

The successful candidate must be a nationally recognized scientist with a distinguished record of administrative leadership, scholarly activity, and grant-and-contract program development. He or she will be expected to administer existing research programs and develop/conduct new activities, primarily by obtaining support from governmental agencies and the private sector. The appointment is at the level of Associate Professor or Professor, is tenurable, and a joint teaching appointment in the Center's graduate-only Department of Marine Sciences is possible. A Ph.D. in a biological or physical science with a strong interest in applied ecology is mandatory.

Salary is competitive and commensurate with qualifications.

Anticipated approval of the position is July of 1985. Starting date is negotiable, but an appointment as soon after the position is approved as possible is preferred. Applications will be accepted until the position is filled, but are preferred before April 15, 1985. Please include a current curriculum vitae, names of at least three references, and a brief statement of research interests and experience to: **Dr. Jack R. Van Lopik, Dean, Center for Wetland Resources, Louisiana State University, Baton Rouge, LA 70803, (504) 388-6710.**

LSU is an Equal Opportunity Employer.

## Anticipated Positions

### Community Plant Ecologist, Benthic Ecologist Coastal Ecology Institute Louisiana State University (LSU)

LSU is seeking applicants for two positions; a community plant ecologist and a benthic ecologist at the assistant or associate professor level in the Coastal Ecology Institute, Center for Wetland Resources. Both candidates should demonstrate experience and a proven research record in both freshwater and coastal ecology, theoretical and applied aspects of ecology, and evidence of effective interaction in interdisciplinary efforts. The benthic ecologist is expected to develop research on the role of benthos in ecosystem functioning.

A joint teaching appointment in the Center's graduate-only Department of Marine Sciences is possible. A Ph.D. in an appropriate field is required.

Salary is commensurate with qualifications and experience. Anticipated approval of the positions in July, 1985. Starting date is negotiable, but an appointment as soon after the position is approved as possible is preferred. Applications will be accepted until the positions are filled, but are preferred before April 15, 1985. Please include a current curriculum vitae, names of at least three references, and a brief statement of research interests and experience to: **Dr. Jack R. Van Lopik, Dean, Center for Wetland Resources, Louisiana State University, Baton Rouge, LA 70803, (504) 388-6710.**

LSU is an Equal Opportunity Employer.

Zyma SA, a medium-size drug company based in Switzerland (in Nyon, on Lake Geneva), with expanding international activity, is seeking a

## Medical Research Assistant

for its department of vascular research.

The duties include:

1. the monitoring, under the supervision of the medical department, of clinical trials, mainly in Europe,
2. the planning of drug development,
3. the biomedical statistical evaluation of the results of these trials.

Candidates: University degree in relevant disciplines, e.g. Public Health (Epidemiology), Statistics, Natural Sciences.

Any previous experience in planning and logistics of drug development, in clinical trial design and monitoring and/or biomedical statistics would be an asset.

Languages: English and French with German as an added advantage.

We offer an interesting position with opportunities of development and favorable conditions.

If you are Swiss or hold a valid work permit please send a handwritten application to Zyma SA, Relations humaines, Mr. Ern , CH-1260 Nyon.

## COMPUTER PROFESSIONALS

### For Major Supercomputer Initiative at CORNELL UNIVERSITY

The Center for Theory and Simulation in Science and Engineering, a major interdisciplinary research center at CORNELL UNIVERSITY devoted to large scale computing offers several opportunities for experienced, innovative computer professionals in a 1990's computing environment.

**SYSTEMS PROGRAMMERS** (3 openings) to participate in major upgrade and expansion of network connecting superminicomputers and scientific workstations to the supercomputer facility and to develop software for prototype massively parallel supercomputers.

**LEAD GRAPHICS RESEARCH PROGRAMMER** to work with nationally prominent Computer Graphics Program developing strategies for integrating advanced graphics into working environment of center researchers and to develop state-of-the-art graphics software.

**GRAPHICS RESEARCH PROGRAMMER** to assist in development of state-of-the-art graphics software.

Knowledge of the following is required for these positions: 4.2 BSD UNIX, VM/CMS, multiple protocols. Experience in large scale computational environment is highly desirable. In addition, we are looking for innovative, independent people who enjoy being challenged to go beyond state-of-the-art.

Submit cover letter and resume by April 15, 1985, to: Cynthia Smithbower, Staffing Services



## Cornell University

160 Day Hall, Ithaca, New York 14853-2801

More detailed information can be obtained by contacting  
Alison Brown at "devvax.alison@cornell.arpa"  
An Affirmative Action/Equal Opportunity Employer

## POSITIONS OPEN

### MOLECULAR BIOLOGIST

The Department of Biology of Saint Louis University has an opening for a tenure-track faculty position at the assistant professor level. The applicant should have a solid biochemical background and postdoctoral experience is preferred. Responsibilities will include teaching both undergraduate and graduate courses in molecular biology as well as developing a strong research program. Please submit curriculum vitae, including a statement of professional goals and research interests, transcripts, and have three letters of recommendation sent to: **Dr. Raymond Walsh, Department of Biology, Saint Louis University, 3507 Laclede Avenue, St. Louis, Mo. 63103.** The review process will begin on 1 April 1985.

*Saint Louis University is an Equal Opportunity/Affirmative Action Employer.*

**MOLECULAR BIOLOGIST**, tenure track. Division of Endocrinology at the University of Colorado Health Science Center is seeking applicants for funded positions starting 1 July 1985. Candidates should have a Ph.D. in molecular-cellular biology and postdoctoral experience. Research to investigate hormonal regulation of gene expression in pituitary and hypothalamus. Applicant must have experience in recombinant DNA cloning techniques, RNA and DNA purification, transcriptional analysis, restriction analysis, cDNA and genomic library screening. Additional experience in translational assays, immunoassays, and protein chemistry desirable. Successful candidate will conduct research, teach, and have supervisory responsibilities in the Colorado Medical School. Send curriculum vitae and names and addresses of four references to: **Dr. E. C. Ridgway, Head, Division of Endocrinology-B151, University of Colorado Health Science Center, 4200 East Ninth Avenue, Denver, Colo. 80262.** Application deadline: 1 May 1985. *An Equal Opportunity/Affirmative Action Employer.*

### MOLECULAR AND CELL BIOLOGY BIOCHEMISTRY/BIPHYSICS Postdoctoral Opportunities

Broad range of membrane research projects: (i) nature of lipid-protein interaction in membranes; membrane dynamics; (ii) membrane reconstitution; (iii) enzyme and protein chemistry; (iv) cloning and site specific mutagenesis of membrane proteins; (v) muscle physiology— $\text{Ca}^{2+}$  release mechanism in excitation-contraction coupling.

Send curriculum vitae, bibliography, three letters of recommendation, and short statement regarding career goals, interests, and experience to: **Professor S. Fleischer, Department of Molecular Biology, Vanderbilt University, Nashville, Tenn. 37235.**

*An Equal Opportunity/Affirmative Action Employer*

**NEUROLOGIST, UNIVERSITY OF KENTUCKY.** The Sanders-Brown Research Center on Aging and the Department of Neurology are seeking a Board-eligible/certified neurologist with research interests in Alzheimer's Disease/aging for a full-time position as assistant professor (tenure-track line). Preference will be given to candidates with research skills in neuroimmunology or neuroendocrinology and participation in teaching and clinical services is expected. The successful applicant will be expected to interact with federally supported research programs in Alzheimer's Disease. Send curriculum vitae to: **Norman H. Bass, M.D., Department of Neurology, or William R. Markesbery, M.D., Sanders-Brown Research Center on Aging, University of Kentucky Medical Center, Lexington, Kentucky 40536.** *Equal Opportunity/Affirmative Action Employer.*

### PLANT MOLECULAR BIOLOGIST

The Department of Biology of the University of California, San Diego (UCSD), invites applications for a tenure-track position in plant molecular biology. The level of the appointment will be commensurate with the experience of the successful candidate. Responsibilities include development of a research program in plant molecular biology, and participation in undergraduate and graduate-level teaching. Candidate must have Ph.D. and postdoctoral experience in plant molecular biology. Please submit curriculum vitae, a statement of professional goals and research interests, and the names of three referees by 1 May 1985 to: **D. David, Plant Molecular Biology Search Committee, Department of Biology, C-016, UCSD, La Jolla, Calif. 92093.** All applications will receive thorough consideration.

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

## POSITIONS OPEN

**EDUCATIONAL CONSULTANT** with any academic doctorate to provide instruction to surgeons in use of our small surgical bonework motor. Video and hands-on instruction provided for surgeons who use equipment with fresh butcher bones to simulate procedures. Executive level work mixed with menial chores of courses. Moderate travel. Begin at \$25,000 to \$30,000. Send curriculum vitae, transcript, and references to: **Midas Rex, 3001 Race Street, Fort Worth, Texas 76111.**

### MOLECULAR GENETICS

**Research Associate:** To study molecular mechanisms of aging using in vitro models in a dynamic, interactive research environment. This project emphasizes bone marrow cultures and hematopoietic aging. Candidates should have at least 2 years of postdoctoral experience in molecular genetics/biology with an interest in cellular aging. Strong future possibility of tenure-track faculty position. Apply with curriculum vitae and names, addresses, and telephone numbers of four references to: **Dr. Samuel Goldstein, Slot 604, Departments of Medicine and Biochemistry, University of Arkansas for Medical Sciences (UAMS), 4301 West Markham, Little Rock, Ark. 72205.** *UAMS is an Equal Opportunity/Affirmative Action Employer.*

### NEUROHISTOLOGISTS—Two positions

Studies will be centered on the localization of peptide neuroregulators in CNS. Projects involve immunocytochemistry and in situ hybridization techniques at both the light and electron microscopy level. Applicants with experience in peptide colocalization, antisera characterization, and CNS anatomy will be preferred candidates. Positions require a doctoral degree. One position is for a senior research staff member who has completed postdoctoral training and who would have broad responsibility within the program. The other position is at a postdoctoral level. Nominations or applications should be sent with curriculum vitae, four letters of recommendation, and a statement of no more than two pages from the candidate dealing with research goals. *Stanford is an Equal Opportunity Employer and welcomes all candidates, including women and members of minority groups.* Salaries are competitive. Please contact: **Edna Dorles, Administrative Assistant, Nancy Pritzker Laboratory, Department of Psychiatry, Stanford Medical School, Stanford, Calif. 94305.**

### NEUROPHYSIOLOGY INTRA-OPERATIVE MONITORING COORDINATOR

Position available June 1985 for experienced electrophysiologist to work in active clinical laboratory and coordinate intra-operative monitoring of electroencephalogram and evoked potentials. Procedures include Fourier analysis of EEG during procedures affecting cerebral blood flow, localization of seizure foci during temporal lobectomies, and monitoring of somatosensory evoked potentials during Harrington rod procedures and resection of spinal cord tumors. Minimum: M.S. degree in biology or related field with experience in electrophysiology and use of monitoring equipment. Ability to work independently is essential; ability to develop new techniques of monitoring a decided advantage. Collaborative research with surgeons and physicians encouraged. Submit curriculum vitae and two letters of recommendation to: **Richard S. Rosenberg, Ph.D., Clinical Neurophysiology Laboratory, Department of Neurology Box 425, The University of Chicago Medical Center, 5841 South Maryland Avenue, Chicago, Illinois 60637.** *The University of Chicago is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL FELLOW** position available in laboratory working on the molecular biology of cell proliferation. Only U.S. citizens or residents may apply (training grant). Send curriculum vitae to: **Dr. Renato Baserga, Chairman, Department of Pathology, Temple University School of Medicine, 3400 North Broad Street, Philadelphia, Pa. 19140.** *Equal Opportunity Employer.*

**POSTDOCTORAL POSITIONS.** Cardiovascular research laboratory studying the molecular biology of lipoproteins is seeking candidates with recombinant DNA and molecular biology expertise. DNA sequencing a plus. Send curriculum vitae and names of references to: **Personnel, c/o Dr. Robert W. Mahley, The Gladstone Foundation Laboratories for Cardiovascular Disease, University of California, San Francisco, P.O. Box 40608, San Francisco, Calif. 94140-0608.**

## POSITIONS OPEN

**Ph.D. IN PHARMACOLOGY OR PHYSIOLOGY** with 2 to 3 years of postdoctoral training in cellular cardiac electrophysiology, including experience with conventional/ion-selective microelectrodes and multicellular voltage-clamp or patch-clamp techniques, to join active research group based in medicine/pharmacology with current interests centering on the cellular electrophysiology and pharmacology of human cardiac tissues and of animal models of ischemia/disease/dysrhythmia, including investigations of: (i) mechanisms of low resting potential; (ii) electrogenic sodium pumping in specimens of human atrium and ventricle; (iii) actions of selected cardioactive drugs and ions, particularly antiarrhythmic and cardiotonic agents; and (iv) uses of monophasic action potential recordings to monitor in vivo drug activity and dysrhythmia. In addition to developing a strong personal research program, responsibilities include laboratory supervision, working with pre- and post-doctoral trainees and teaching. Tenure-track appointment possible (assistant professor). Salary commensurate with experience/training. Please send statement of research interests, curriculum vitae, and references to: **Donald H. Singer, M.D., c/o Reingold ECG Center, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, Illinois 60611.**

**PLANT MOLECULAR BIOLOGIST/BIOTECHNOLOGIST.** The Department of Plant Pathology and Crop Physiology, Louisiana State University, is searching for a faculty member at the assistant professor level to conduct research aimed at developing cellular and molecular approaches for plant improvement with emphasis on plant-pathogen interactions. Strategies of interest include protoplast fusion, haploid culture, and/or genetic engineering techniques. Program development is expected to follow interests of the successful candidate, and basic as well as applied investigations will be encouraged. Teaching a graduate level course and advising graduate students will be encouraged. Applicants must have a Ph.D. with emphasis in plant physiology, plant pathology, and/or biochemistry. Application deadline: 1 May 1985, or until suitable candidate is found. This tenure-track appointment is available 1 July 1985. To apply, a résumé, transcripts, a statement of your research interests, and three letters of reference should be sent to: **Dr. Lowell L. Black, Chairman of the Search Committee, Department of Plant Pathology and Crop Physiology, Louisiana State University, 302 Life Sciences Building, Baton Rouge, Louisiana 70803; telephone: 504-388-1464.** *Louisiana State University is an Equal Opportunity/Affirmative Action Employer.*

**PLANT PHYSIOLOGIST.** Tenure-track position at the assistant/associate professor level for an individual with postdoctoral experience, and research goals in plant physiology at the cell/molecular level. Appointment to be effective 1 September 1985. Candidates must have a good botanical background with the capability to teach basic botany as well as upper level and graduate courses in plant physiology and development. The candidate must have a strong interest in teaching undergraduates and a fundable research program in which students will be involved. Reappointment and tenure decisions will be based on teaching effectiveness and research productivity. Forward curriculum vitae, reprints, statement of research goals, and three letters of recommendation by 31 March 1985 to: **Chairperson, Plant Physiologist Search Committee, c/o Marilyn Miller, Director of Personnel and Affirmative Action, Box 246, State University of New York, Plattsburgh, N.Y. 12901.** *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITIONS (TWO)** available immediately for recent Ph.D.'s to join active research group based in medicine/pharmacology in studies on the cellular electrophysiology and pharmacology of human cardiac tissues and of animal models of ischemia/disease/dysrhythmia. Current interests include investigations of: (i) basic mechanisms underlying low resting potential in specimens of human atrium and ventricle; (ii) electrogenic sodium pumping; (iii) electrophysiological actions of selected cardioactive drugs and ions, particularly antiarrhythmic and cardiotonic agents; and (iv) uses of monophasic action potential recordings to monitor in vivo drug activity and dysrhythmia. Experience with conventional cellular cardiac electrophysiological techniques required. Ion-selective microelectrode, multicellular voltage-clamp and/or patch clamp experience also desirable. Please send statement of research interests, curriculum vitae, and references to: **Donald H. Singer, M.D., c/o Reingold ECG Center, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, Ill. 60611.**

## POSITIONS OPEN

### PLANT PHYSIOLOGIST/ PLANT MOLECULAR BIOLOGIST

The Department of Biology at Northeastern University is seeking a **PLANT PHYSIOLOGIST** or **PLANT MOLECULAR BIOLOGIST** to interface with the existing plant science program. The appointment is at the assistant professor level and is a tenure-track position to begin September 1985. Candidates must have a Ph.D. degree in the area of plant physiology/plant molecular biology or a related plant science and postdoctoral experience in one of the above areas. We seek an individual with a demonstrated potential for developing an externally funded research program in plant physiology and/or plant molecular biology. The successful candidate will be expected to contribute to undergraduate and graduate teaching in the plant sciences in addition to supervising undergraduate and graduate student research. Applicants should submit curriculum vitae, statement of research plans and objectives, and three letters of reference by 15 April 1985 to: **Dr. Daniel C. Scheirer, Chairman, Plant Physiology/Plant Molecular Biology Search Committee, Department of Biology, Northeastern University, 360 Huntington Avenue, Boston, Mass. 02115. Northeastern is an Equal Opportunity/Affirmative Action/Title IX University.**

### THE INTERNATIONAL LIVESTOCK CENTRE FOR AFRICA

This multidisciplinary research centre with projects at various sites in sub-Saharan Africa has a limited number of vacancies for **POSTDOCTORAL ASSOCIATES**. Recent graduates with the Ph.D., or equivalent, are invited to apply for positions in agricultural economics, forage legume agronomy, statistics and computer science, animal science and reproductive physiology.

Candidates must be fluent in English and a knowledge of French is most desirable. *Preference will be given to African nationals.* Contracts are for 1 year and may be renewed for one additional year. The annual salary is U.S.\$20,500; round-trip air travel from recruitment site, a modest air freight allowance, medical insurance, and accommodation will be provided.

Candidates should send full biographic information, abstracts of theses, titles of publications, a statement of their research interests, and the names of three referees to: **The Director of Training, ILCA, P.O. Box 5689, Addis Ababa, Ethiopia.**

**POSTDOCTORAL BIOCHEMIST OR IMMUNOLOGIST.** To study the mechanisms of, and genes coding for, natural killer lymphocyte-mediated lysis of tumor cells. Funding for 3 years at levels comparable to NIH postdoctoral fellowships. Preference will be given to the recent graduate with experience in molecular biology. University of Nevada at Reno is located at an elevation of 5000 feet, adjacent to Lake Tahoe and the high Sierra. Mail curriculum vitae with three references to: **Dorothy Hudig, Ph.D., Associate Professor, Department of Microbiology, School of Medicine, University of Nevada at Reno, Reno, Nevada 89557. Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITION.** Department of Neurology, Yale University, available spring 1985 for studies of event-related potentials in man and animals. Applicant should have a strong background in one or more of the following areas: event-related potentials and cognitive processes; evoked potential assessment of neurological disorders; neurophysiology of sensory systems. Experience with multi-user computer system and associated programming skills essential. Send résumé, short statement of research interests, and names of three references to: **Truett Allison, Neuropsychology Laboratory/116B1, Veterans Administration Medical Center, West Haven, Conn. 06516.**

**POSTDOCTORAL POSITION** available immediately to study regulation and function of ornithine decarboxylase. This enzyme is modulated by hormones, mitogens, tumor promoters, and oncogenic transformation. We have recently generated mutant cell lines [*J. Biol. Chem.* 258, 8384 (1983); *J. Biol. Chem.* 258, 12083 (1983)] and cloned probes [*PNAS* 81, 540 (1984)] that have made the enzyme accessible to study. Applicants should have cell and molecular biology experience. Send curriculum vitae and the names of three references to: **Dr. Philip Coffino, Department of Microbiology, University of California, San Francisco, California 94143.**

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

## POSITIONS OPEN

### THE UNIVERSITY OF SYDNEY POSTDOCTORAL FELLOW— Reference Number 6/12 DEPARTMENT OF PSYCHOLOGY

To participate in an interdisciplinary research programme on the psychobiology of energy balance and obesity. Experience with stereotaxic surgery in rats, vascular catheterization, and microcomputers desirable. The appointment commences immediately and is renewable for up to 5 years.

Salary range: A\$21,411 to A\$23,903 per annum.

Applications, quoting reference number, including curriculum vitae and the names and addresses of two referees, to: **The Registrar, University of Sydney, New South Wales 2006, Australia, by 15 April 1985.**

**POSTDOCTORAL POSITION** available to study the role of carbohydrate-mediated postsynthetic modification of proteins in diabetes and aging. Applicants should have a recent Ph.D. in biochemistry or chemistry with background in protein chemistry. Send curriculum vitae and names of three references to: **Dr. Vincent M. Monnier, Institute of Pathology, Case Western Reserve University, Cleveland, Ohio 44106. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION.** The project involves the development of biologically produced bifunctional monoclonals for cancer diagnosis and therapy. Experience with monoclonals, hapten-carrier complexes, drug conjugates, radiochelators, enzymes, immunomodulators, and toxins preferred. Project involves conjugate formation, immunization, cell hybridization, immunoassays, flow cytometry, characterization of antibody reactivity, and testing of bifunctional antibodies with cell lines and tumor-bearing mice. Send curriculum vitae and telephone numbers of references to: **Dr. C. L. Reading, Monoclonal Antibody Laboratory, M. D. Anderson Hospital, Box 179, 6723 Bertner, Houston, Texas 77030. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available 1 June 1985 to study the comparative functional biochemistry of the glucose-6-phosphate dehydrogenase polymorphism in *Drosophila melanogaster*. Experience with enzyme kinetics, protein purification, and quantitative immunoelectrophoresis desirable. Position available for 2-year appointment. Send curriculum vitae and two letters of reference to: **Dr. Walter F. Eanes, Department of Ecology and Evolution, State University of New York, Stony Brook, N.Y. 11794.**

**POSTDOCTORAL POSITION** in molecular toxicology available 22 March 1985. Studies will involve toxicant effects on membrane protein synthesis and degradation. Experience with membrane protein isolation, gel electrophoresis, or immunochemistry is required. Send résumé, transcripts, and two letters of recommendation to: **Dr. Daniel P. Selivonchick, Department of Food Science, Toxicology Program, Oregon State University, Corvallis, Ore. 97331; telephone: 503-754-3131. Application deadline: 29 March 1985.**

*Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973.*

### POSTDOCTORAL POSITIONS

Postdoctoral training is available in molecular and cellular mechanisms of carcinogenesis in The Eppley Institute for Research in Cancer and Allied Diseases of The University of Nebraska Medical Center. Research programs include, for example, chemistry of formation and metabolism of nitrosamides, nitrosamines and hydrazines; mechanisms of carcinogenesis of polycyclic hydrocarbons and other carcinogens; lymphomagenesis; cell differentiation; and growth factors; biochemical genetics particularly as relates to susceptibility and resistance to cancer development; mutagenesis and DNA repair; molecular biology of cancer; viruses and cell immortalization and transformation; toxicology of food additives; and oncogenes and cancer. The Eppley Institute is well equipped for both in vitro and in vivo work. Postdoctoral applicants should have a Ph.D. in chemistry, biochemistry, microbiology, pharmacology, or related disciplines. Stipends are competitive. Please submit curriculum vitae, names of three references, and summary of research interests to: **Dr. Edward Bresnick, Director, Eppley Institute for Research in Cancer and Allied Diseases, University of Nebraska Medical Center, Omaha, Neb. 68105. An Equal Opportunity/Affirmative Action Employer.**

## POSTDOCTORAL POSITIONS

The Microbiology Department of The New Jersey Medical School is accepting applications for several research associate positions in the general area of Molecular Virology (Molecular Genetics of Polyomaviruses, adenovirus early region IA and IB functions) and mammalian and human genetics (cellular transformation of oncogenes). Candidates should have a Doctoral Degree (or completed thesis requirements) in Molecular Biology/Biochemistry. In addition, knowledge and experience in molecular genetics, recombinant DNA Technology, protein biochemistry and transfer and expression of genes in mammalian cells is preferred. Attractive salaries commensurate with capabilities and experience. The Department of Microbiology has nine vigorous, well-funded young groups with research interests in the area of Molecular Genetics and offers an outstanding academic environment. Our location (8 miles from Downtown Manhattan) permits easy access by public transportation, or by car to NYC and a variety of attractive suburbs within a 3-10 mile range. Please send curriculum vitae and names and telephone numbers of three references to: **Dr. Giampiero Di Mayorca, Professor and Chairperson, Department of Microbiology, MSB, F-607 UMDNJ-New Jersey Medical School, 100 Bergen Street, Newark, New Jersey 07103. An Equal Opportunity/Affirmative Action Employer. m/t/h/v.**

### University of Medicine and Dentistry of New Jersey

### Vacancy Announcement U.S. Environmental Protection Agency (EPA) Research Triangle Park North Carolina

Applications are invited for a **PROTEIN CHEMIST/BIOCHEMIST** for a position in the field of human pulmonary immunology and immunotoxicology. The position is located in the Clinical Research Branch, Inhalation Toxicology Division, Health Effects Research Laboratory. It is a permanent, full-time federal Civil Service position (GS-12/13). The salary range will depend upon individual qualifications.

The successful candidate will be expected to conduct research in the area of soluble mediators (cytokines, growth factors, and mediators of inflammation) involved in the regulation of and communication between immune and pulmonary cells in normal and disease states. The emphasis of the program will include studies aimed to understand the role of inhalation pollutants such as O<sub>3</sub> and NO<sub>2</sub> on the induction of disease.

The Clinical Research Branch of the EPA is located on the University of North Carolina campus at Chapel Hill and 10 miles from Duke with ample opportunities for exciting collaborative arrangements in an academic setting.

The candidate should: (i) possess a Ph.D. in biochemistry or protein chemistry, (ii) have a minimum of 2 years of postdoctoral research experience in the isolation and biochemical characterization of lymphokines or growth factors and have a demonstrated research ability as evidenced by publication in peer review journals, and (iii) have a demonstrated record of the ability to collaborate in a highly cooperative setting. U.S. citizenship required.

Forward curriculum vitae and names of four persons that can be contacted for references to: **Dr. Hillel S. Koren, c/o Personnel Management Division (MD-29), U.S. EPA, Research Triangle Park, North Carolina 27711, no later than 15 April 1985.**



## POSITIONS OPEN

**POSTDOCTORAL POSITION** in interleukin 1 research. Opportunities to study the interleukin 1 receptor, the mechanism of action of interleukin 1, or the regulation of interleukin 1 synthesis in different pathologic states. Experience in biochemistry, receptor biology, or molecular biology preferred. Position available 1 September 1985. Send curriculum vitae and three letters of reference to: Dr. Steven B. Mizel, Department of Microbiology and Immunology, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem, N.C. 27103.

**POSTDOCTORAL POSITION** for a recent Ph.D. to study molecular mechanisms of transcription and its developmental regulation in eukaryotes. Protein purification/characterization and molecular genetics (recombinant DNA) experience desirable. Details on request. Send (no later than 30 April 1985) résumé and three reference letters to: Marvin Paule, Biochemistry, Colorado State University (CSU), Fort Collins, Colo. 80523. CSU is an Equal Opportunity/Affirmative Action Employer. Equal Opportunity Office: 314 Student Services Building.

**POSTDOCTORAL POSITION** available immediately to study electrophysiology and cell volume regulation in isolated epithelia. Techniques involve the use of standard and ion selective intracellular microelectrodes, and a computer oriented video optical system for image analysis. Send curriculum vitae and three letters of recommendation to: Arthur L. Finn, M.D., University of North Carolina School of Medicine, Department of Medicine, Division of Nephrology, 3034 Old Clinic Building 226H, Chapel Hill, North Carolina 27514.

### POSTDOCTORAL POSITION

Available immediately in developmental and cancer research laboratory, to study biochemical mechanisms in growth factor action. Background must include protein purification and characterization. Send curriculum vitae and references to: Dr. Olga Greengard, Department of Pediatrics, THE MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, N.Y. 10029. An Equal Opportunity Employer.

**POSTDOCTORAL POSITIONS** for teaching and research starting August 1985, for 2 years to support half-time teaching of laboratory sections in introductory biology and half-time research in collaboration with a member of the faculty who provides the facilities. To obtain information on areas of research or to apply, send résumé and three letters of recommendation by mid-April to: Paul Megrew, Department of Biology, University of Iowa, Iowa City, Iowa 52242. An Equal Opportunity/Affirmative Action Employer.

## Allelix

### POSTDOCTORAL RESEARCH ASSOCIATE RESEARCH TECHNICIAN

Postdoctoral research associate and research technician positions are available within the Molecular Biology Division to work on control of gene expression in fungi.

Allelix Inc. is inviting application for the above described positions. Postdoctoral candidates should have a Ph.D. degree and experience in DNA technology or gene expression.

Interested candidates are asked to send complete résumés, including references and quoting file number 0073, to:

Dr. R. W. Davies  
Allelix Inc.  
6850 Goreway Drive  
Mississauga, Ontario, Canada L4V 1P1

**POSTDOCTORAL RESEARCH ASSOCIATE** available 1 July 1985 to participate in NIH-funded studies of molecular interactions between streptococci and platelets. Experience in microbial genetics or platelet response mechanisms desired. Salary: \$20,000. Send curriculum vitae, statement of goals, and names of three references to: Dr. Mark C. Herzberg, Departments of Periodontics and Oral Biology, School of Dentistry, University of Minnesota, Minneapolis, Minn. 55455. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

## POSITIONS OPEN

**NIH-funded POSTDOCTORAL POSITION** available to study phagocyte biochemistry with special emphasis on the role of oxidants and proteases in host defense and inflammation [see *Science* 222, 625 (1983); *J. Biol. Chem.* 259, 399 (1984); *J. Clin. Invest.* 73, 1297 (1984)]. Aggressive individual with Ph.D. or M.D. and strong background in cell biology-biochemistry are essential. Send curriculum vitae and three references to: Dr. Stephen J. Weiss, Simpson Memorial Research Institute, Division of Hematology/Oncology, 102 Observatory Street, Ann Arbor, Michigan 48109.

### POSTDOCTORAL RESEARCH STAFF MEMBER IN MARINE SCIENCE

The successful candidate will interact with a multidisciplinary group of marine scientists working on a variety of programs on the distribution, fate, and effects of organic contaminants in sediments. This 2-year term position requires the analysis by GC-MS and HPLC of complex mixtures of contaminants and their metabolites extracted from sediments and tissues. Recent Ph.D. in either organic chemistry, geochemistry, or environmental chemistry. Graduates with experience in analyzing complex mixtures of contaminants in marine sediments and tissues, an interest in describing novel molecules in the marine environment, or an inclination to develop advanced applications of mass spectrometry are encouraged to apply. For consideration, please forward your curriculum vitae to: Earl G. Morrell, Professional Employment Division, Lawrence Livermore National Laboratory, P.O. Box 5510, Department KSC-3F5, Livermore, Calif. 94550.

U.S. citizenship required. An Equal Opportunity Employer, M/F/H/V.

### POSTDOCTORAL RESEARCH STAFF MEMBERS BIOMEDICAL SCIENCES

The positions will involve the use of human chromosome-specific DNA libraries for the preparation of chromosome-specific hybridization probes. Fluorescently tagged probes will allow identification of specific metaphase chromosomes or subchromosomal regions utilizing flow cytometry and/or quantitative fluorescence microscopy. This system can then be used for the rapid measurement of chromosome aberrations, such as aneuploidy, translocations, and deletions, in normal and cancerous tissue. Candidates should have a Ph.D. with broad experience in recombinant DNA techniques including non-radioactive labeling methods. An academic background in molecular biology and biochemistry is desired.

Successful candidates will have ready access to recombinant DNA libraries produced from single chromosomes purified by fluorescence activated sorting and to state-of-the-art analytical cytology laboratory containing numerous flow systems and quantitative fluorescence microscope. For consideration, please forward your curriculum vitae to: Earl G. Morrell, Professional Employment Division, Lawrence Livermore National Laboratory, P.O. Box 5510, Department KSC-3F5, Livermore, Calif. 94550.

U.S. citizenship required. An Equal Opportunity Employer, M/F/H/V.

### UNIVERSITY OF PENNSYLVANIA Diabetes Research Center RESEARCH ASSISTANT PROFESSOR

Nontenure-track, Ph.D., or M.D., with pertinent postdoctoral experience. Candidates will be expected to have theoretical knowledge and practical proficiency in molecular biology for studying fundamental problems of pancreatic islet cell metabolism or expertise in biochemical pharmacological approaches to investigate the role of ion channels and pumps in stimulus secretion coupling in endocrine cells.

Please send résumé, including list of publications and summary of research, and three letters of reference to: Franz M. Matschinsky, M.D., Director, Diabetes Research Center, University of Pennsylvania School of Medicine, 414 Anatomy-Chemistry Building/G3, Philadelphia, Pa. 19104.

The deadline for applications is 15 April 1985. The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN

### PRE- AND POSTDOCTORAL POSITIONS AVAILABLE IN TOXICOLOGY

Contact:

Graduate Administrator  
Toxicology Program  
Box 7613  
N. C. State University  
Raleigh, N.C. 27695

### Université de Montréal

The Department of Pathology is looking actively for a **RESEARCH ASSISTANT PROFESSOR**. Applicants should have a Ph.D. or a certification in pathology, postdoctoral experience in immunology and molecular or cellular biology, and a record of significant research.

Submit curriculum vitae and reference to:  
Micheline Pelletier, M.D., Chairman  
Department of Pathology  
Faculty of Medicine  
Université de Montréal  
P.O. Box 6128, Station "A"  
Montreal, Quebec, Canada H3C 3J7  
Telephone: 514-343-6294

### RESEARCH ASSISTANT PROFESSOR—IMMUNOLOGY

Assistant professor, nontenure-track position, available immediately in the Department of Surgery with a possible joint appointment in the Department of Microbiology and Immunology. A Ph.D. in immunology with at least 3 years of postdoctoral training, including some expertise in molecular immunology, is required. The principal responsibilities include development of an independent research program and collaboration with other ongoing activities within the vascular and transplant division of the Department of Surgery. Please submit curriculum vitae and names of references to: T. Mohanakumar, Ph.D., Professor of Surgery and Microbiology/Immunology, Box 5 M.C.V. Station, Medical College of Virginia, Virginia Commonwealth University, Richmond, Virginia 23298. An Affirmative Action/Equal Opportunity Employer.

**PRE- AND POSTDOCTORAL POSITIONS** are available immediately under a grant funded by the **JOHN D. AND CATHERINE T. MACARTHUR FOUNDATION** on health-promoting and health-damaging behavior. Applicants should be working toward a Ph.D. in sociology, anthropology, psychology, or physiology as they relate to health, or have completed their Ph.D. in these fields, or their M.D. and residency training. This is a 1- and/or 2-year fellowship. Areas of research include alcoholism (Ernest Noble, M.D., Ph.D.), tobacco or other drug abuse (Murray Jarvik, M.D., Ph.D.; Jed Rose, Ph.D.), obesity (Morton Maxwell, M.D.; David Heber, M.D., Ph.D.), hypertension (David Shapiro, Ph.D.), disorders of weight regulation and eating (John Morley, M.D.; Donald Novin, Ph.D.; Michael Strober, Ph.D.; Herbert Weiner, M.D.; Joel Yager, M.D.), behavioral methods for reducing blood pressure (David Shapiro, Ph.D.), stress, and methods for enhancing health. Preference will be given to those interested in interdisciplinary research training under the preceptorship of senior investigators. Candidates should be prepared to work on their own specific projects in any of these areas. Please address letters of inquiry, curriculum vitae, and three letters of recommendation to: Herbert Weiner, M.D., Principal Investigator, UCLA Neuropsychiatric Institute, 760 Westwood Plaza, Los Angeles, Calif. 90024.

An Equal Opportunity/Affirmative Action Employer

### RESEARCH ASSOCIATE

Postdoctoral position as research associate at Harvard Medical School available immediately in the Mailman Research Center of McLean Hospital. Research deals with the neurobiology of protein and neuropeptide metabolism and the role of proteolysis in neuropsychiatric disorders and aging. Experience with immunocytochemistry related immunohistochemical techniques is required. Familiarity with protein characterization and enzymology is also desirable but not essential. Minimum requirements: recent or pending Ph.D. with background in biochemistry, immunology, or cell biology. Address curriculum vitae and letters of reference to: Ralph A. Nixon, M.D., Ph.D., Ralph Lowell Laboratories, and send to: Nikki Alexander, Manager of Employment, McLean Hospital, 115 Mill Street, Belmont, Mass. 02178. McLean Hospital is a teaching affiliate of Harvard Medical School and Massachusetts General Hospital. An Equal Opportunity Employer.

Becton Dickinson is a rapidly growing biotechnology company and a leader in the development of monoclonal antibodies and sophisticated computer based cell sorters used in medical and biological research. We have an immediate opening for:

## Postdoctoral Position

Available immediately in immunology, protein chemistry, or molecular biology to study regulation and biosynthesis of interleukins and interleukin receptors. Research involves monoclonal antibody production, in vitro biological assays, peptide synthesis, and gene probe analysis. Alternative projects involve molecular cloning and expression of lymphokine proteins and cell surface antigens. Experience with recombinant DNA techniques is preferred but not required.

Send curriculum vitae and references to: **Dr. Vernon C. Maino, Becton Dickinson Monoclonal Center, 2375 Garcia Avenue, Mountain View, CA 94043.**  
An equal opportunity employer.

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# Organic Chemists PhD

Ayerst Laboratories, a subsidiary of Fortune 100 American Home Products, is seeking experienced Organic Chemists at the PhD level for its state-of-the-art research facility in Princeton, New Jersey.

These positions involve the synthesis of medicinally active compounds.

The ideal candidate should possess a PhD in organic Chemistry with strong academic achievement followed by 3-7 years of experience with superior accomplishments in medicinal chemistry.

Ayerst offers an excellent benefits package, together with an ultra modern facility in a picturesque New Jersey setting. Interested candidates should send their resume indicating current salary earnings to:

Personnel Manager

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CN 8000, Dept. O-R Princeton, N.J. 08540

Equal Opportunity Employer M/F/H

# ATHEROSCLEROSIS RESEARCH

The Du Pont Company has openings in their Central Research and Development Department for principal investigators to participate in interactive research efforts and to establish independent programs in their own areas of expertise.

Permanent research positions are available at the Junior (minimum requirement of three years postdoctoral experience) and Senior levels. Candidates should have proven productivity and creativity in the areas of arterial wall cell biology, pathogenesis of atherosclerosis, or in either the enzymology or regulation of cholesterol metabolism.

Du Pont provides outstanding research facilities in their new Health Sciences building located at the Du Pont Experimental Station in Wilmington, Delaware. Qualified candidates should send their curriculum vitae, names of three references, and a short statement of research interests to: **Dr. S.T. Toy, Room X40720, Employee Relations Department, Du Pont Company, Wilmington, DE 19898.**



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## CSIRO

AUSTRALIA  
RESEARCH FELLOW  
A\$25,342 to A\$31,270

DIVISION OF PLANT INDUSTRY  
CANBERRA, ACT

### FIELD: Population Biology of Host-Pathogen Relationships.

CSIRO conducts scientific and technological research in laboratories located throughout Australia and employs about 7500 staff, of whom some 2900 are professional scientists. The Organization's research activities are grouped into five Institutes: Animal and Food Sciences, Biological Resources, Energy and Earth Resources, Industrial Technology, and Physical Sciences. The CSIRO Division of Plant Industry is a member of the Institute of Biological Resources.

**GENERAL:** The CSIRO Division of Plant Industry conducts research on problems fundamental to plant biology and agricultural production. One research program is concerned with an understanding of the role of disease in non-agricultural plant communities, the interaction between these and agricultural communities with respect to plant pathogenic organisms and the identification of mechanisms of disease resistance.

**DUTIES:** To undertake research on ecological, genetical, and pathological aspects of the interaction between native and introduced plant species and various pathogens of ecological and agricultural importance. The aim of these studies is to determine the extent of the regulatory role of pathogens on the size and genetic structure of non-agricultural plant populations.

**QUALIFICATIONS:** A Ph.D. degree or equivalent qualifications in an appropriate field, with research experience in relevant aspects of ecology, genetics, or plant pathology. Experience and interests in more than one of these fields would be advantageous.

**TENURE:** A term of 3 years with Australian Government superannuation benefits available.

**APPLICATIONS:** Stating relevant personal particulars, including details of qualifications and experience, the names of at least two professional referees, and quoting reference Number A6286, should be directed to:

The Chief  
CSIRO Division of Plant Industry  
G.P.O. Box 1600  
Canberra, ACT  
Australia 2601

by 12 April 1985.

CSIRO is an Equal Opportunity Employer

## POSITIONS OPEN

**POSTDOCTORAL RESEARCH ASSOCIATE** position available to study intracellular calcium regulation in skeletal muscle. Ongoing research on excitation-contraction coupling utilizes measurements of radioisotope uptake and fluxes and force generation in single muscle fibers microdissected to access the intracellular space. Send curriculum vitae and three letters of reference to: **Dr. Elizabeth W. Stephenson, Department of Physiology, University of Medicine and Dentistry of New Jersey-New Jersey Medical School, 100 Bergen Street, Newark, N.J. 07103. An Equal Opportunity/Affirmative Action Employer, M/F/H/V.**

### POSTDOCTORAL TRAINING IN RETROVIRUSES, ONCOGENES

Position available in spring 1985 in the laboratory of Dr. Harriet Robinson at the Worcester Foundation for Experimental Biology. Interested candidates are encouraged to send curriculum vitae, three references, and a brief statement of their research interests to: **Dr. Harriet Robinson, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.**

*An Equal Opportunity/Affirmative Action Employer*

**RESEARCH ASSOCIATE.** Department of Horticulture, University of Wisconsin-Madison. Interdisciplinary research and training program supported by a grant from the McKnight Foundation. Investigations to emphasize plant genetic control of physiological processes integral to  $N_2$  fixation. Qualifications will include Ph.D. in plant science discipline, with emphasis on genetics and breeding, physiology and biochemistry. Send application, transcripts, and three letters of recommendation to: **Frederick A. Bliss, Department of Horticulture, University of Wisconsin, Madison, Wis. 53706.** Applications accepted until 29 March 1985 or until the position is filled. Begin 1 April 1985.

**RESEARCH INSTRUCTORSHIP**, to participate in research on structure-function relationships of enzymes. The prospective candidate should have a recent Ph.D. degree in biochemistry or molecular biology or chemistry. Starting salary: \$16,000 to \$22,000 for calendar year, depending on experience. Send curriculum vitae by 1 May 1985 to: **Director, Bioenergetics Laboratory, Acheson Hall, State University of New York, Buffalo, N.Y. 14214-3094. An Equal Opportunity/Affirmative Action Employer.**

**VERTEBRATE PALEONTOLOGY**—Postdoctoral position available in the Shuler Museum of Paleontology. Responsibilities involve curation and research of choice. Send curriculum vitae, statement of research goals, and names (with telephone numbers) of three references to: **Louis L. Jacobs, Institute for the Study of Earth and Man at Southern Methodist University, Box 274, Dallas, Texas 75275.**

### VICE PRESIDENT FOR AGRICULTURAL AFFAIRS (CENTRAL ADMINISTRATION) AND PROVOST, DIVISION OF AGRICULTURAL AND LIFE SCIENCES (COLLEGE PARK CAMPUS), UNIVERSITY OF MARYLAND

Applications and nominations are invited for the single position of Vice President for Agricultural Affairs and Provost, Division of Agricultural and Life Sciences. As vice president, this officer is the University's chief spokesperson on agricultural matters and is responsible to the President for the University-wide coordination of agricultural programs and for the general direction of statewide aspects of the Agricultural Experiment Station and the Cooperative Extension Service. As provost, this officer serves as the chief executive of the Division of Agricultural and Life Sciences on the College Park Campus and is responsible to the Vice Chancellor for Academic Affairs for the teaching, research, and Extension activities of the agricultural and life sciences departments on that campus. Candidates should have an earned doctorate and broad experience in one of the disciplines of the agricultural and life sciences. Experience in administration, teaching and public service, and a record of scholarly publications is desired. Salary is negotiable. The position is available 1 July 1985. Nominations, or letters of interest and curriculum vitae, may be sent to: **Dr. Peter G. Brown, Secretary, Search Committee, President's Office, University of Maryland, Adelphi, Md. 20783.** Deadline for nominations: 18 March 1985 or until a suitable candidate is appointed. *The University of Maryland is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**RESEARCH ASSOCIATE/POSTDOCTORAL POSITION** available in the Dermatology Research Laboratories, the University of Rochester School of Medicine and Dentistry, as of 1 July 1985 for recent Ph.D. to study regulation of expression and synthesis of epidermal cytoskeleton and cell membrane proteins. Experience in molecular biology, developmental biology, or molecular genetics desirable. Please submit curriculum vitae and names of three references to: **Dr. L. A. Goldsmith, Dermatology Unit, University of Rochester Medical Center, Rochester, N.Y. 14642. The University of Rochester is an Equal Opportunity/Affirmative Action Employer.**

**TWO RESEARCH ASSOCIATE POSITIONS** available immediately. Experience in membranes and recombinant DNA. Salary: \$18,000 to \$22,000. Send curriculum vitae and three references to: **Dr. O. P. Bahl, Department of Biological Sciences, State University of New York at Buffalo, Cooke Hall 347, Buffalo, N.Y. 14260. Equal Opportunity/Affirmative Action Employer.**

### RESEARCH FACULTY POSITION IN PHYSICAL OCEANOGRAPHY

The School of Oceanography of the University of Washington invites applications for a research faculty position in dynamical studies in physical oceanography. The school currently carries out field and theoretical research in the areas of general circulation, wave and eddy dynamics, climate, small-scale mixing, high latitude dynamics, and coastal and estuarine processes. Strong interactions exist with the Department of Atmospheric Sciences, NOAA's Pacific Marine Environmental Laboratory, and the University's Applied Physics Laboratory. There are exciting prospects in the School of Oceanography for the growth of dynamical studies as a component of new interdisciplinary problems, for example, in climate, tracer chemistry, and interactions between the circulation of the seas and life within them. The level of the appointment will depend on the candidate's experience.

Applicants should submit curriculum vitae and the names of four references to: **Dr. Brian T. R. Lewis, Director, School of Oceanography, WB-10, University of Washington, Seattle, Wash. 98195. Telephone: 206-543-6487.** The closing date for applications is 15 April 1985. Ad Number 851. *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

### ILLINOIS LEGISLATIVE SCIENCE INTERN

Sangamon State University invites applications from graduates (baccalaureate, master's, doctorate) of science or engineering programs for two 10.5-month science internships beginning 1 October 1985 as part of the Illinois Legislative Staff Internship Program. The science interns will be assigned to the Springfield and Chicago Science Offices of the Illinois Legislative Research Unit. The Science Office provides legislators with information and research about policy issues that involve science and technology. As part of the program, the science interns will participate in an academic seminar with other legislative interns. Applicants should be mature, self-motivated scientists or engineers with interests in public service. Send curriculum vitae by 26 April 1985 to: **Dr. Kent Redfield, Coordinator, Illinois Legislative Staff Internship Program, Sangamon State University, Springfield, Illinois 62708.**

One-year assistant professor, September 1985: **VERTEBRATE ECOLOGIST/BIOLOGIST**; Ph.D. required. Teaching responsibilities will include: undergraduate general ecology; general biology; mixed (undergraduate and graduate) vertebrate ecology. There is the possibility that the department will be searching for a tenure-track teaching/research position in this general area to begin September 1986. Applicants should send curriculum vitae and arrange to have three letters of reference sent by 9 April to:

**Dr. Joseph A. J. Orkiszewski  
Professor and Chairman  
Department of Biology  
Villanova University  
Villanova, Pa. 19085**

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## POSITIONS OPEN

**RESEARCH HYDROLOGIST** in the Career Federal Service, U.S. Department of Agriculture (USDA), Agricultural Research Service, Hydrology Laboratory, Beltsville, Maryland, is seeking a researcher to initiate, plan, and conduct investigations in one or more of the following areas: hydrologic modeling, soil water transport, groundwater hydrology, water quality, remote sensing, hydrometeorology, climatology, or snow hydrology. Must have a degree in hydrology or related field or equivalent education and experience, plus 3 years of professional experience in the subject of specialization. Ph.D. is desirable. Must be U.S. citizen. Salary commensurate with experience (\$25,489 to \$42,928 per annum). Call Dr. Albert Rango for position information on 301-344-3490. Send appropriate application and transcript to: **R. Cunningham or telephone: 301-344-3954 at: USDA, Agricultural Research Service, Personnel Operations Branch, Room 107, Building 003, BARC-West, Beltsville, Maryland 20705.** Deadline for receipt of application is 1 April 1985. *An Equal Opportunity Employer.*

**The Arabian Gulf University** (regional university, supported and supervised by the seven Arabian Gulf States) invites applications for the post of **SENIOR TEACHING POSITION** in the following areas: biology, chemistry, physics, mathematics, computer science, and teaching English as a foreign language. Preference will be given to applicants with knowledge of Arabic and administrative experience. Language of instruction is English. Last day for applying is 15 April 1985. Send applications to:

**Office of the President  
(Committee of Premed Program)  
The Arabian Gulf University—Bahrain  
P.O. Box 26671, Adliya, Bahrain  
Telex: 7319 AGU-BN**

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### VERTEBRATE CELLULAR PHYSIOLOGIST

Full-time, 1-year replacement position starting 1 September 1985. Responsibilities include teaching courses in comparative vertebrate physiology, mammalian physiology, and electrophysiology, lecturing in the animal physiology section of the introductory biology course, and directing tutorial research for senior majors. Ph.D. required. Priority given to completed applications received before 15 April 1985. Please send cover letter, curriculum vitae, three letters of reference, and transcripts of all graduate and undergraduate college work to:

**Roy S. Meyers, Chair  
Physiology Search Committee  
Biology Department  
Skidmore College  
Saratoga Springs, N.Y. 12866**

**VISITING SCIENTIST** positions are available for new and established Ph.D.'s and/or M.D.'s in the areas of cell and molecular biology. Some experience in either area is desirable but not essential. Appointments will be made for at least 2 years at an annual salary up to \$25,000, depending on qualifications and experience. Employment will also include liberal fringe benefits. Interested applicants should send curriculum vitae and names of three references to: **Dr. Gordon H. Sato, c/o Personnel Office, W. ALTON JONES CELL SCIENCE CENTER, 10 Old Barn Road, Lake Placid, New York 12946.**

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**VISUAL SCIENTIST.** Research associate position available immediately for research on human spatial vision. Investigate optical quality of eye and photoreceptor mosaic with automated laser interferometry. Competitive salary. Send curriculum vitae and names of four references to: **David Williams, Ph.D., Center for Visual Science, University of Rochester, Rochester, N.Y. 14627. The University of Rochester is an Equal Opportunity/Affirmative Action Employer.**

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The American Association for the Advancement of Science (AAAS) is seeking a qualified professional to work with its Committee on Science, Arms Control and National Security. Projects include, but are not limited to: (i) an annual series of congressional seminars and congressional staff institutes on key arms control issues; (ii) an annual science, arms control, and national security colloquium; and (iii) coordination and editing of Committee studies and other publications. Other responsibilities will include: developing proposals for funding; representing the AAAS and the Committee's program; writing reports and papers; managing projects; and supervising personnel. The project director will also assist in overall program development, support other work of the Committee, supervise interns and consultants, and such other activities as may be required to further and manage the Association's program in science, arms control and national security. The project director will report to the program head.

The appropriate candidate should have a Ph.D. or other advanced degree and at least 2 years of relevant experience in one of the following: arms control and national security policy; congressional and legislative affairs; and conference and publications management. The areas of education and experience should encompass some of the following areas: some background in natural science or engineering or weapons technology; some background in political science/international affairs; familiarity with the legislative and executive branches of the federal government; knowledge of the Soviet Union and Europe; and familiarity with scientific and educational organizations. He or she should have demonstrated writing proficiency. Scholarly accomplishment in arms control or national security studies is desirable.

The preferred salary range is low to mid-\$30,000's, but will depend upon experience and qualifications. The starting date for the position is 1 May 1985 or earlier if possible. The appointment will be for 2 years with probable renewal for at least two more years. Interested candidates should send a letter of application with curriculum vitae and the names and telephone numbers of at least two references to: **Carolyn Pruitt, Personnel Manager, AAAS, 1515 Massachusetts Avenue, NW, Washington, D.C. 20005**. The deadline for application is 1 April 1985. *Equal Opportunity Employer.*

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**PROCEDURES:** Applicants should call the Library of Congress Employment Office at (202) 287-5627 to request a copy of Vacancy Announcement No. 50032 and a Personal Qualifications Statement (Standard Form 171). Applications will be accepted for this position through March 30, 1985. Resumes will not be accepted in lieu of the Personal Qualifications Statement.

Civil Service Status Not Required  
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The selected applicant will be required to file a financial disclosure statement with the House of Representatives, U.S. Congress, in accordance with the provisions of Public Law 95-521, Ethics in Government Act of 1978.



## POSITIONS OPEN

### SENSOR PHYSICIST

A Cincinnati company seeks a sensor physicist for the manufacture of measurement and control instrumentation. The position requires a Ph.D. in physics, with a major in optics, and 1½ years of experience as a research assistant in co-polymer research. The position also requires demonstrated ability or experience in developing computer hardware and software. Responsibilities include on-line measurement instrumentation utilizing various optic techniques including infrared, x-ray, Raman spectrum, and holographic/laser; evaluate properties of materials through chemical or spectrum analysis; develop through the prototype state computer hardware and software for new instrumentation. Working conditions: office, laboratory, and plant, 40 hours per week (8 a.m. to 5 p.m.). Salary: \$27,230. Send your résumés for referral to employer to: **Ohio Bureau of Employment Services, Employer Reference Number 0595702, 1916 Central Parkway, Cincinnati, Ohio 45214.**

## CONFERENCE

### CONFERENCE

Given Institute Course in Aspen, Colorado Symposium on T-Cell Receptors, Genetic Structure and Function  
5, 6, and 7 July 1985

Registration \$100 (trainees \$50). Limited to first 100 received. Deadline for applications is 1 May 1985. For information, write to: **Dr. Nicole Suciu-Foca, Department of Pathology, Columbia University College of Physicians and Surgeons, 630 West 168 Street, New York, N.Y. 10032.**

## TRAINING PROGRAMS

**REPRODUCTIVE PHYSIOLOGY** oriented toward ovarian function, pregnancy, parturition and perinatology at Cornell University, Ithaca, N.Y. Candidates must have an M.D. or equivalent, Ph.D. or D.V.M. degree, and must be either U.S. citizens or permanent residents in the United States. Physician trainees may be eligible to obtain clinical training as part of this program. Training will be conducted by Dr. B. Currie, Dr. J. Fortune, Dr. W. Hansel, Dr. P. W. Nathanielsz, and Dr. T. Reimers. Address inquiries to: **Dr. P. W. Nathanielsz, M.D., Ph.D., Reproductive Studies, New York State College of Veterinary Medicine, Cornell University, Ithaca, N.Y. 14853; telephone: 607-256-5454. An Equal Opportunity/Affirmative Action Institution.**

### PROGRAM IN NEUROSCIENCE

The University of Texas Graduate School of Biomedical Sciences directs your attention to our Graduate Program in Neurosciences leading to the Ph.D. in biomedical sciences. Considerable resources in faculty expertise, laboratory tutorials, and stipends are available to graduate program students here in the Texas Medical Center. For information, telephone: 713-792-8650, or write:

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### POSTDOCTORAL/PREDOCTORAL TRAINEES IN ENVIRONMENTAL PATHOLOGY

Training program purpose: develop research skills for determining pathogenesis of environmentally induced disease focusing on mechanisms of carcinogenesis/mutagenesis and neurotoxicity/heavy metals. Broad research spectrum: from descriptive models of disease to molecular mechanisms of disease development. Stress on integrative research—approach using variety of research techniques (flow cytometry, cytogenetics, EM, ELISA, x-ray analysis, and so forth) *Must be citizens or permanent U.S. residents.* Predoctoral candidates: request application materials. Postdoctoral candidates: send curriculum vitae and three letters of reference to: **Dr. David G. Kaufman, Department of Pathology, University of North Carolina at Chapel Hill, Chapel Hill, N.C. 27514. An Affirmative Action/Equal Opportunity Employer.**

## SYMPOSIUM

**PLANT BIOLOGY SYMPOSIUM ON PLANT-ENVIRONMENT INTERACTIONS.** The 12th annual University of Minnesota Plant Biology Symposium will be held 29 to 31 May 1985, in St. Paul, Minnesota. The Symposium will cover genetic, physiological, and molecular biology aspects of plant-environment interactions. Current information on plant disease pathogenicity factors, plant responses to diseases and other organisms, and molecular and physiological changes induced in plants by temperature and other stresses will be emphasized. For registration information and a schedule of topics and speakers, contact: **Plant Biology Symposium, Department of Agronomy, University of Minnesota, St. Paul, Minn. 55108 (telephone: 612-373-1371).**

## COURSE

**ELECTRON MICROSCOPY (TEM/SEM):** Biological Applications. Designed for professional and laboratory personnel who desire practical hands on training in basic techniques of TEM and SEM. Graduate credit and/or certificate awarded. Tuition: \$800. Date: 8 to 26 July 1985. For further information and registration form, contact: **Dr. Dan Scheirer, Department of Biology, Northeastern University, Boston, Mass. 02115; telephone: 617-437-2260.**

## SUMMER INTERNSHIPS

**NASA PLANETARY BIOLOGY SUMMER INTERNSHIPS.** The Marine Biological Laboratory, Woods Hole, Massachusetts, invites applications from graduate students and seniors accepted in graduate programs for \$1,800 awards to participate in research at NASA centers and collaborating institutions during the summer. Application deadline: 1 April 1985. For information and applications, contact: **David Bermudes, Planetary Biology Intern Program, Department of Biology, Boston University, 2 Cummings Street, Boston, Mass. 02215. An Equal Opportunity/Affirmative Action Institution.**

## FELLOWSHIPS

### FELLOWSHIP IN NEUROPATHOLOGY

The Sanders-Brown Research Center on Aging and the Department of Pathology, University of Kentucky Medical Center, invite applications for a postdoctoral fellowship in either clinical or basic science research in neuropathology. M.D. or Ph.D. candidates, whose background and interests are in Alzheimer's disease, neuroimmunomodulation, or immunocytochemistry are especially welcomed. Stipend between \$25,000 and \$30,000 per year, depending upon background and education. Fellowship to begin 1 July or 1 September 1985. Inquiries, curriculum vitae, and three references to: **William R. Markesbery, M.D., University of Kentucky Medical Center, Lexington, Ky. 40536. Telephone: 606-233-6049.**

### POSTDOCTORAL FELLOWSHIP

A postdoctoral fellow is being sought to work on physiological and neurochemical aspects of the actions of opioids. Ongoing projects include neurochemical and physiological analysis of opioid-mediated pregnancy-induced analgesia, neurochemical correlates of up and down regulation of opiate receptors, processing and release of enkephalins and studies of opiate receptor function. Send curriculum vitae to: **Dr. Alan Gintzler, Department of Biochemistry, Box 8, Downstate Medical Center, 450 Clarkson Avenue, Brooklyn, N.Y. 11203.**

**FOOD SCIENCE AND NUTRITION FELLOWSHIPS AT THE UNIVERSITY OF FLORIDA.** Graduate fellowships funded by the U.S. Department of Agriculture for doctoral programs in food science and experimental nutrition are available with an annual stipend of \$15,000. Individuals with a superior academic record and a degree in food science, nutrition, chemistry, biochemistry, microbiology, medical sciences, engineering, or a related field are encouraged to apply. Contact: **Dr. F. F. Busta, Food Science and Human Nutrition Department, University of Florida, Gainesville, Fla. 32611.**

## FELLOWSHIPS

**SYSTEMATIC HERPETOLOGY.** Applications invited for 1-year research fellowship. Applicant must have received Ph.D. Stipend: \$17,000 plus \$1,000 expenses. Award on 1 July 1985. Submit résumé, including list of publications; description of research, including the desirability of working at the Academy; graduate transcripts if Ph.D. received in past 5 years; and names, addresses, and telephone numbers of three references to: **Director of Administration, California Academy of Sciences, Golden Gate Park, San Francisco, Calif. 94118. Closing date: 30 April 1985.**

**POSTDOCTORAL FELLOWSHIP** in endocrinology research. Group is part of NIH funded diabetes-endocrinology research center. Focus is on pancreatic islet research. Applicants must possess M.D. or Ph.D. degree with background in biochemistry, physiology, or cell biology. Stipend is competitive. Send curriculum vitae, description of current research interests and objectives, and three letters of recommendation to: **Postdoctoral Search Committee, Department of Biochemistry, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, Mass. 01605. Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL FELLOWSHIP** in neurophysiology of the vertebrate retina. Candidates should have experience in patch or whole-cell clamp techniques and apply them to biophysical and pharmacological studies of identified retinal cells. Candidates must be U.S. citizens or permanent residents and should send curriculum vitae and two letters of recommendation to: **Dr. Dominic Man-Kit Lam or Dr. Samuel M. Wu, Cullen Eye Institute, Baylor College of Medicine, Houston, Texas 77030.**

## ASSISTANTSHIPS

**GRADUATE RESEARCH ASSISTANTSHIPS IN ATMOSPHERIC CHEMISTRY AND PHYSICS at OREGON GRADUATE CENTER.** Experimental and theoretical research in sources, sinks, global distributions of atmospheric trace gases; climatic effects; climate models; ocean-air exchange of gases; ancient atmospheres and polar ice cores; regional scale pollution and visibility; arctic haze; receptor and dispersion models for urban and regional pollution; aerosol chemistry. Stipends of \$8600 for qualified Ph.D. students. Higher stipends possible in second year. Write: **Professor M. A. K. Khalil, Department of Chemical, Biological, and Environmental Sciences, Oregon Graduate Center, 19600 N.W. Von Neumann Drive, Beaverton, Oregon 97006. Affirmative Action/Equal Opportunity Employer.**

## ASSOCIATESHIPS

**POSTDOCTORAL ASSOCIATESHIPS IN MOLECULAR BIOPHYSICS AND PHYSIOLOGY** to work on NMR, EPR and ENDOR, and physiological studies of metalloproteins and intact cells. Salaries commensurate with NIH guidelines, with cost of living adjustments for New York City. Write to: **Dr. Philip Aisen or Dr. Raj K. Gupta, Albert Einstein College of Medicine, Bronx, N.Y. 10461.**

## TRAINEESHIPS

**POSTDOCTORAL TRAINEESHIPS IN DEVELOPMENTAL BEHAVIORAL GENETICS.** The Institute for Behavioral Genetics (IBG) invites applications for two NICHD-sponsored postdoctoral traineeships to begin 1 September 1985. Appointments will be for a 1-year period with renewal possible for a second year. Successful candidates will engage in collaborative developmental research with IBG faculty members whose interests include developmental quantitative genetics and computer applications, developmental pharmacology, developmental neurotoxicology, developmental ethology, and molecular embryology. Standard NIH postdoctoral salaries (\$15,996 to \$21,996). Submit curriculum vitae, brief research plan, three letters of recommendation, and selected reprints to: **Professor Robert Plomin, IBG, Box 447, University of Colorado, Boulder, Colo. 80309. Deadline is 1 June 1985. The University of Colorado is an Equal Opportunity/Affirmative Action Employer.**

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## MOLECULAR BIOLOGIST

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RTI is a not-for-profit, university affiliated, contract research organization located in the Research Triangle Park, North Carolina. RTI currently employs over 900 scientists and support staff in a stimulating research environment.

Starting salary will be commensurate with experience; expenses and a liberal fringe benefit package are included. To apply, send résumé, a statement of research interests, and the names of three references to:

**Research Triangle Institute**  
Office of Personnel  
P.O. Box 12194  
Research Triangle Park, NC 27709



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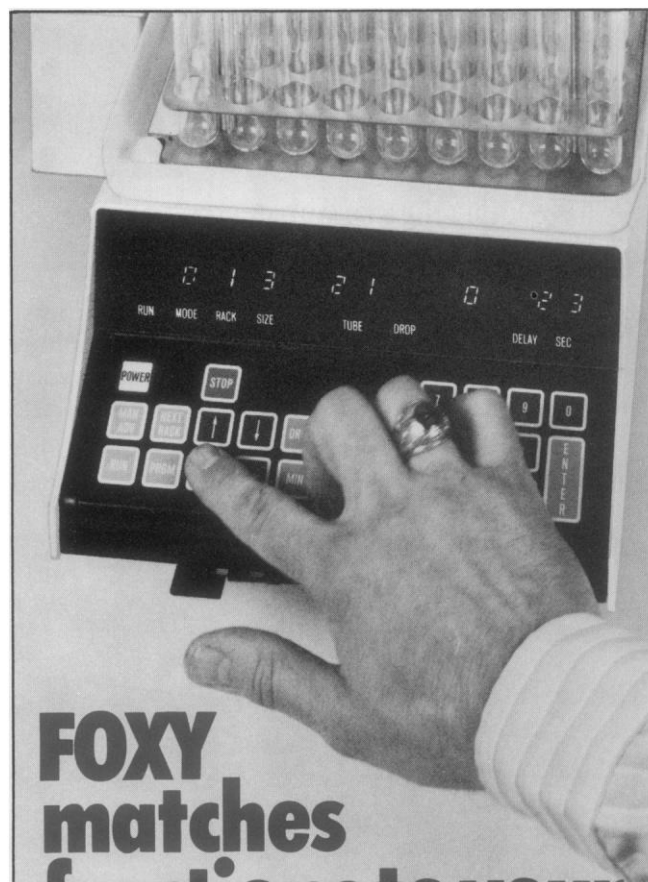
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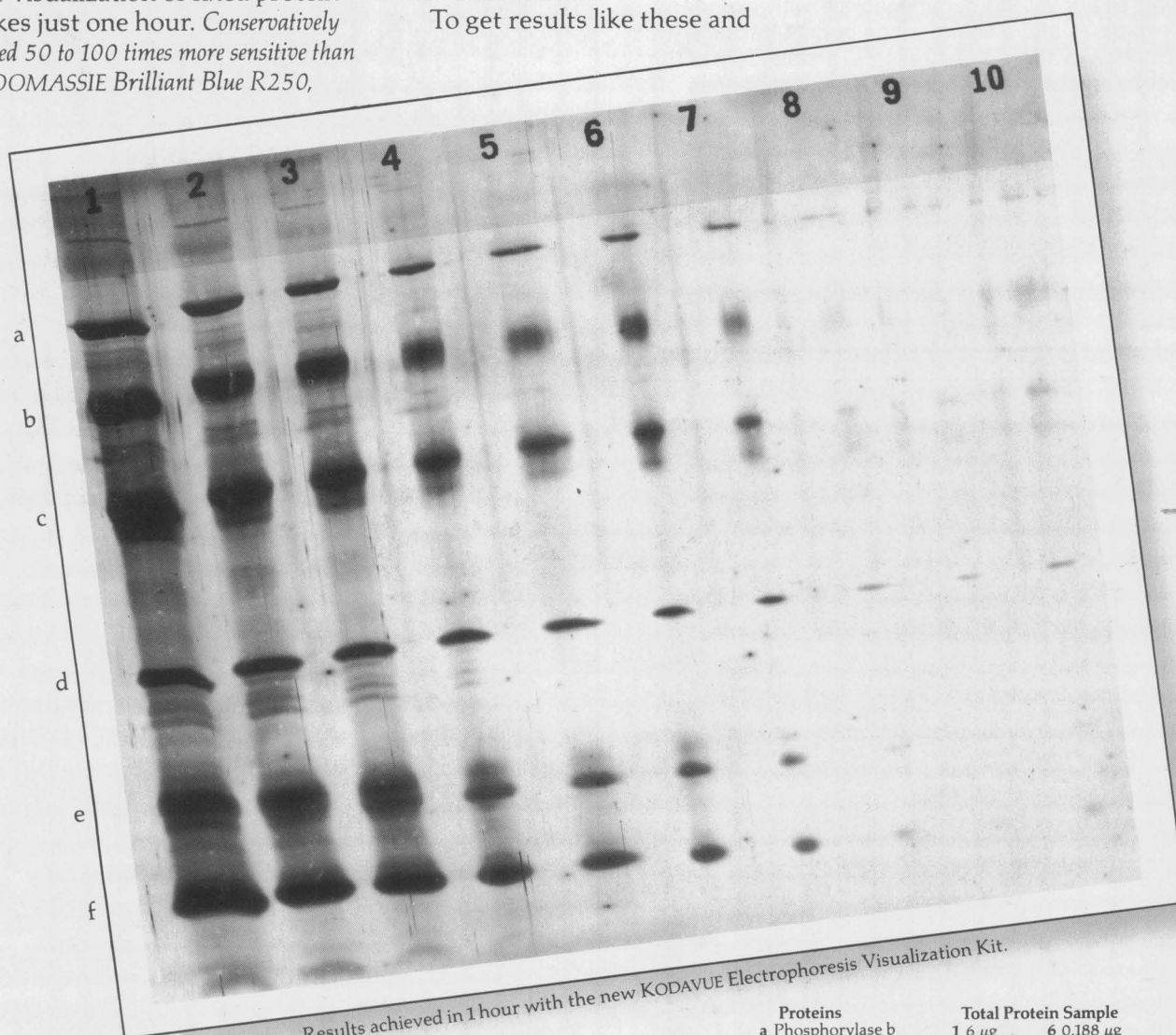
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