mainly on the supposed sophistication of Oldowan and Acheulean stoneworking techniques. The evidence cited for control of fire in the Lower Pleistocene is questionable, and the relevance in this discussion of well-known long-distance transport of flint in the late Magdalenian is unclear.

A. Turner's chapter, "Hominids and fellow-travellers," like several in this volume, stresses the importance of ecological comparisons between the early hominids and contemporaneous carnivore species. Turner specifically tackles the problem of hominid radiation into temperate latitudes and New World continents, putting it into the context of the migrations of other large mammals. A more detailed example focuses on the glacial population of Britain. Though it makes the case that human dispersals were not unique, this chapter is disappointingly inconclusive concerning the causes and exact mechanisms of the radiations. The enabling relationships Turner sees between social organization and environment are only vaguely sketched. The theme of hominid occupation of Britain is continued in K. Scott's "Hunter-gatherers and large mammals in Great Britain," which provides good detail on environmental conditions and the timing of repeated occupation and abandonment of this marginal region of glacial-age northwestern Europe. It would have been interesting had Scott further pursued the implications of her data on seasonality from the Upper Paleolithic and her information on glacial vegetation types. As they stand, these interesting tidbits are tossed out without follow-up.

After the (unjustified) criticism that studies of regional Upper Pleistocene Russian and Spanish faunas by R. G. Klein and myself, respectively, are not truly regional in character, one would have expected some genuinely innovative results from C. Gamble's chapter, "Regional variation in hunter-gatherer strategy in the Upper Pleistocene of Europe." Instead the regions Gamble creates are justified and defined, some of the parameters of the problem are sketched, variation in cave bear density is described, and interesting contrasts in human distribution patterns between interglacial and full glacial times are discussed, with speculation on local extinctions of human population. If the fact that hunter-gatherers intensified their food acquisition activities late in the Pleistocene is the main conclusion of this paper, I fail to find evidence for its innovativeness in substantively dealing with regional variation in subsistence strategies in Ice Age Europe.

The final paper-A. N. Garrard's "Community ecology and Pleistocene extinctions in the Levant"-seems a bit out of place and almost trivial in this context. It makes the usual case that environmental changes at or around the Pleistocene-Holocene boundary were probably basically responsible for the few extinctions that occurred then in the Near East, although competition with humans may have contributed to the elimination of Crocuta crocuta and Panthera leo.

Though it contains a number of informative, stimulating papers on matters of current interest, this book is spotty and disappointing in its inconclusiveness. Foley and the authors make a concerted effort to relate the chapters to one another, but a more coherent focus by all on the issues defined by Foley would have helped the book as a whole. Most of the authors are, however, to be applauded on the clarity and style of writing. The editing is excellent, without the usual flood of typographical errors now common in Academic Press books of this sort.

LAWRENCE GUY STRAUS Department of Anthropology, University of New Mexico, Albuquerque 87131

Books Received

Advancing Agricultural Production in Africa. D. L. Hawksworth, Ed. Commonwealth Agricultural Bu-reau, Slough, U.K., 1984. xviii, 454 pp., illus. \$120. From a conference, Arusha, Tanzania, Feb. 1984. Agreement and Anaphora. A Study of the Role of Pronouns in Syntax and Discourse. Peter Bosch. Academic Press, Orlando, Fla., 1983. xiv, 260 pp. \$35. Cognitive Science Series. Alcoholism and Related Problems Issues for the

Alcoholism and Related Problems. Issues for the

Alconoism and Related Problems, issues for the American Public. Prentice-Hall, Englewood Cliffs, N.J., 1984. vi, 208 pp. + appendix, Paper, \$6.95. Allelopathy. Elroy L. Rice. 2nd ed. Academic Press, Orlando, Fla., 1984. xii, 424 pp., illus. \$55. Physiological Ecology. Physiological Ecology.

Physiological Ecology. Alternative Energy Systems. Electrical Integration and Utilisation. Mike West *et al.*, Eds. Pergamon, New York, 1984. x, 289 pp., illus. \$48. From a conference, Coventry, England, Sept. 1984. Analysis of Structural Learning. M. A. Jeeves and G. B. Greer. Academic Press, Orlando, Fla., 1983. x 269 pp. illus. \$40.

x, 269 pp., illus, \$40

Brain Receptor Methodologies. Part A, General Methods and Concepts; Amines and Acetylcholine. Paul J. Marangos, Iain C. Campbell, and Robert M. Cohen, Eds. Academic Press, Orlando, Fla., 1984. xx, 363 pp., illus. \$56. Neurobiological Research. Building Your Own Nature Museum. For Study

and Pleasure. Vinson Brown. Illustrated by Don Greame Kelley. Arco, New York, 1984. xii, 161 pp. \$7.9 \$12.95; paper,

S12.95; paper, \$7.95. Cancer Today. Origins, Prevention, and Treat-ment. Leslie Roberts. National Academy Press, Washington, D.C., 1984. xii, 132 pp., illus. Paper, \$9.95

Databases-Role and Structure. P. M. Stocker, P. M. D. Gray, and M. P. Atkinson, Eds. Cambridge University Press, New York, 1984. vi, 400 pp.

Dermatopathology. W. H. C. Burgdorf *et al.* Springer-Verlag, New York, 1984. x, 219 pp., illus. Paper, \$29.50.

Dynamic Modelling and Control of National Economies 1983. T. Basar and L. F. Pau, Eds. Published for the International Federation of Automatic Control by Pergamon, New York, 1984. xiv, 474 pp.,

illus. \$116. IFAC Proceedings Series (1984), No. 7.

From a conference, Washington, DC., June 1983. Electron Spectroscopy. Theory, Techniques and Applications. Vol. 5. C. R. Brundle and A. D. Applications. Vol. 5. C. R. Brundle and A. D. Baker, Eds. Academic Press, Orlando, Fla., 1984.

Riphicatolis, Vol. 30, C. R. Bundie and A. 1984.
saker, Eds. Academic Press, Orlando, Fla., 1984.
xii, 378 pp., illus. \$75.
Genetic Manipulation. Impact on Man and Socie-ty. Werner Arber et al., Eds. Published on behalf of the ICSU Press by Cambridge University Press, New York, 1984. xx, 250 pp., illus. \$34.50. From a symposium, Cologne, April 1983.
The Glaciers of Equatorial East Africa. Stefan Hastenrath. Reidel, Boston, 1984 (distributor, Kluwer Boston, Hingham, Mass.). xxiv, 353 pp., illus. \$72.50. Solid Earth Sciences Library.
Growth of Crystals. Vol. 12. A. A. Chernov, Ed. Consultants Bureau (Plenum), New York, 1984. x, 355 pp., illus. \$55. Translated from the Russian edition (Moscow, 1977) by J. E. S. Bradley.
Health Risks to Female Workers in Occupational Exposure to Chemical Agents. R. L. Zielhuis et al.

Exposure to Chemical Agents. R. L. Ziehlus et al. Springer-Verlag, New York, 1984. xii, 120 pp. Pa-per, \$27.50. International Archives of Occupational and Environmental Markh and Environmental Health Supplement. Translated from the Dutch edition (1982)

InfoWorld's Essential Guide to Atari Computers. Scott Mace. Harper and Row, New York, 1984. x,

292 pp., illus. Paper, \$16.95. Lithium Battery Technology. H. V. Venkatasetty, Ed. Wiley-Interscience, New York, 1984. xvi, 247 pp., illus. \$42.50. The Electrochemical Society Se-

The Mammals of the Southern African Subregion. Reay H. N. Smithers. Color plates by Clare Abbott. University of Pretoria, Pretoria, Republic of South Africa, 1983 (distributor, S. A. Reader's Choice, Cape Town). xxii, 736 pp. \$75. Marine Science of the North-West Indian Ocean

Marine Science of the North-West Indian Ocean and Adjacent Waters. Martin V. Angel, Ed. Perga-mon, New York, 1984. vi pp. + pp. 571–1035, illus. Paper, \$60. *Deep-Sea Research*, Part A, vol. 31, Nos. 6–8A. From a symposium, Alexandria, Egypt, Scat. 1025. Sept. 1983. Materials Used in Pharmaceutical Formulation. A.

T. Florence, Ed. Published for the Society of Chemi-cal Industry by Blackwell Scientific, Palo Alto, Calif., 1984. xviii, 161 pp., illus. \$35. Critical Re-

Calli, 1994, Avin, 161 pp., Inds. 955, Critical Ac-ports on Applied Chemistry, vol. 6. Mathematical Aspects of Superspace. H.-J. Seifert, C. J. S. Clarke, and A. Rosenblum, Eds. Reidel, Boston, 1984, xii, 214 pp. \$39. NATO ASI Series C, vol. 132. From a workshop, Hamburg, Germany, Vol. 132. July 1983

Proceedings of the Eighth Power Systems Computation Conference. (Helsinki, Aug. 1984). Butter-worths, Boston, 1984. xx, 1257 pp., illus. \$159.95. Progress in Immunology V. Y. Yamamura and T. Tada, Eds. Academic Press, Orlando, Fla., 1983.

Japan, Aug. 1983.

Property Rights and Sovereign Rights. The Case of North Sea Oil. Peter D. Cameron. Academic Press, Orlando, Fla. 1983. x, 210 pp. \$32. Law, State and Society Series, 12.

Protein Transport and Secretation. Dale L. Ox-ender, Ed. Liss, New York, 1984. xxii, 422 pp., illus. \$78. UCLA Symposia on Molecular and Cellu-lar Biology, New Series, vol. 15. From a sympo-

sium, Keystone, Colo., April 1983. Proteinase Action. P. Elödi, ed. Akadémiai Kiadó, Budapest, 1984. x, 475 pp., illus. \$47. Symposia Biologica Hungarica, vol. 25. From a workshop,

Diologica Hungarica, vol. 25. From a workshop, Debrecen, Hungary, Aug. 1983. Psychological and Social Structures. Sandor B. Brent. Erlbaum, Hillsdale, N.J., 1984. xii, 316 pp., illus. \$36.

Review of U.S. Military Research and Development 1984. Kosta Tsipis and Penny Janeway, Eds. Perga-mon-Brassey's, Washington, D.C., 1984. viii, 229

pp. \$25. **The Revival of Injured Microbes.** M. H. E. An-drew and A. D. Russell, Eds. Academic Press, Orlando, Fla., 1984. xiv, 395 pp., illus. \$44. Society for Applied Bacteriology Symposium Series, No. 12. The composium Loughborough. England, July From a symposium, Loughborough, England, July

Science Now. Arco, New York, 1984. 247 pp., illus. \$21.95.

Semiconductors and Semimetals. Vol. 21, Hydro-genated Amorphous Silicon: Part C, Electronic and Transport Properties. Jacques I. Pankove, Ed. Aca-demic Press, Orlando, Fla., 1984. xiv, 437 pp., illus. \$74.50.

University-Industry Research Interactions. Herbert I. Fusfeld and Carmela S. Haklisch, Eds. Pergamon, New York, 1984. viii, 183 pp., illus. \$25. The Tech-nology Policy and Economic Growth Series. From a conference, Stockholm, March 1983. Also published

in Technology in Society, vol. 5, No. 3/4. Warble Fly Control in Europe. Chantal Boulard and H. Thornberry, Eds. Balkema, Rotterdam, 1984. x, 156 pp., illus. \$12.50. From a symposium, Brussels, Sept. 1982.

GENE ANALYSIS TECHNIQUES

Editors:

Jack G. Chirikjian, Georgetown University, and Takis S. Papas, National Cancer Institute

Here at last is a journal devoted entirely to the methodological aspects of biotechnological experimentation. In six concise, information-packed issues a year, Gene Analysis Techniques brings you reliable, original reports on

- original procedures newly developed materials and
- reagents
- the latest laboratory equipment new instrumentation
- innovative ways to apply existing instrumentation

These time- and money-saving methods are refereed by a distinguished editorial board to be thoroughly reproducible in your industrial or academic laboratory. Whether your specialty is molecular biology, biochemistry, immunology, or microbial genetics, Gene Analysis Techniques is your one-stop resource for the latest in méthodological advances Volume 2 (6 issues), 1985, ISSN-0735-0651 Institutional Rate: \$64.00

Personal Rate: \$32.00 For air delivery in the U.S., Canada, or Mexico, add \$7.00. Subscribers outside the U.S. should add \$6.50 for surface delivery (not available to Europe); \$13.00 for surface air lift delivery to Europe; \$15.50 for surface air lift to Japan; or \$16.00 for air delivery to the rest of the world. Elsevier Science Publishing Co., Inc. EB277

P.O. Box 1663 Grand Central Station New York, NY 10163 ELSEVIER

Circle No. 192 on Readers' Service Card

Janis Quality! SuperTran Cryostat Systems



These versatile cryostats combine a flexible transfer line with a cold finger sample mount and a variety of vacuum jackets.

They provide fast cooldown to 2 K, and smoothly vary the temperature to 300 K (600 K, optional) with excellent stability.

Complete systems are supplied with temperature sensors and automatic controllers, plus storage dewars and vacuum pumping stations.

Please contact us with your requirement.

JANIS RESEARCH COMPANY, INC.

2 Jewel Drive, Wilmington, MA 01887 • Tel: (617)657-8750 Telex: 200079 Circle No. 279 on Readers' Service Card

SCIENTIFIC/ENGINEERING PC GRAPHICS TOOLS

GRAFMATIC[®] **PLOTMATIC**[®] for FORTRAN/PASCAL PROGRAMMERS

The GRAFMATIC (screen graphics) and companion PLOTMATIC (pen plotter) libraries of modular scientific/engineering graphics routines let you easily create 2D and 3D plots in customized or default formats. Pen plot preview with GRAF-MATIC. Plot interactively or in deferred mode. Primitives (mode, color, cursor, character, pixel, line, paint ...) plus auto-scaling, autoaxis generation, auto-tic mark labeling, function plots, tabular plots, error bars, auto-function plots (complete plot in default format with one easy call), auto-tabular plots, log/ parametric/contour plots, 3D rotation/scaling/translation, wire frame model (for old time's sake), hidden line removal for solid models (GRAFMATIC only), cubic and bicubic spline interpolants, least squares fits, bar and pie charts, screen dump.... You name it. We have it! Best of all, the clearest and most complete documentation to be found in microcomputerland. User support? Of course, call us! We offer a no questions asked money-back guarantee.

1 MARCH 1985

SCREEN and PEN PLOTTER Software Libraries for the **IBM PC Tandy 2000 TI Professional**



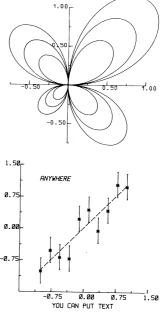
MICROCOMPATIBLES

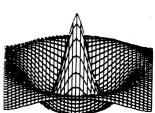
301 Prelude Dr	
Silver Spring, MD 2	0901
(301) 593-0683	
GRAFMATIC*	\$135
PLOTMATIC*†	\$135
BOTH	\$240
OMNIPLOT [S]	\$135
OMNIPLOT [P] [†]	\$135
вотн	\$240
*Specify Compiler (Mfg.	and Ver
sion): IBM/MS/IBM Prof. F(ORTRAN
+Specify Plotter: HP/HI/IB	

OMNIPLOT [S] OMNIPLOT P NO Programming Required

Integrated stand-alone graphics libraries to drive your CRT monitor or your pen plotter. Key in data in response to menu prompts or read your data from a disk file. Choose from an assortment of graphics formats: tabular, line, bar or pie charts. Contour plots. (YES! Just part of our integrated OMNIPLOT library, not an expensive individual item). Create 3-D plots with a choice of wire frame or hidden surface removal for added realism. Choose standard, semi-log or log-log scales; gridding; error bars; line colors and types; marker symbol colors and types. Cubic spline interpolations and least squares fitting options. As with our other professional packages we offer clear and careful documentation filled with examples, user support, and a no-questions asked money-back guarantee.

Ask for OMNIPLOT [S] for screen graphics and OMNIPLOT [P] for the pen plotter software library.





Circle No. 248 on Readers' Service Card

To help meet the worldwide need for more effective management of renewable resources, AAAS announces the publication of **Resource Inventory and Baseline Study Methods for Developing Countries.**

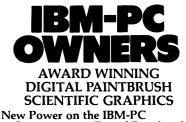
This single volume explains current qualitative and quantitative methods for establishing renewable natural resource inventories and environmental baseline surveys. From national development planning to specific project design, this book focuses on how to obtain and analyze information on four ecosystem components: soils, water, plants, and wildlife.

This reference work provides ready access to practical information useful to planners and managers involved in economic assistance programs in developing countries. Additionally, it gives an overview of ecosystems and resources in cultural contexts.

The result of a two-year study involving thirty scientists, the book was prepared under the auspices of the AAAS Committee on Arid Lands with funding from the Agency for International Development administered by the U.S. National Park Service.

Edited by Francis Conant, Hunter College; Peter Rogers, Harvard University; Marion Baumgardner, Purdue University; Cyrus McKell, NPI, Salt Lake City, Utah; Raymond Dasmann, University of California, Santa Cruz; and Priscilla Reining, AAAS.

> ISBN 0-87168-258-3 565 pages \$22.95 AAAS member price \$19.95 Order from AAAS Marketing Department, 1101 Vermont Avenue, N.W., Dept. S, Washington, D. C. 20005.



Our easy to use Digital Paintbrush™ for the IBM handles like a pen and sells for \$450. You can:

Digitize • Integrate areas • Draft with automatic line, circle, rectangle, 3-D. • Spline-fitted curves • Snap-grids
Color separating lift-off • Pick-up • Move • Expand-contract • Stretch, flip
Multiple Type Fonts • Printouts • Symbol library • Statistics • Linear regression.

Use it as a planimeter, measure area of X-Ray lesions or angiograms. • Plot X-Y coordinates, • Measure length and perimeter, • Instant statistical analysis • Plot regression lines • Make your lecture slides using number generated graphs.

Ask for the Digital Paintbrush, new IBM version,^{*} from The Computer Colorworks. **Call toll-free 1-800-874-1888 or in California 415-331-3022.** 3030 Bridgeway, Sausalito, CA 94965. *Requires IBM color-graphics and game control adapter. For 35 mm. slides requires Camera.

Circle No. 250 on Readers' Service Card

SCIENCE

Posters

The following posters of *Science* covers are available:

30 March 1979, Tropical flowering tree;

23 February 1983, Landsat photo of Detroit, Michigan;

29 July 1983, Cheetah;

2 December 1983, Snowshoe hare;

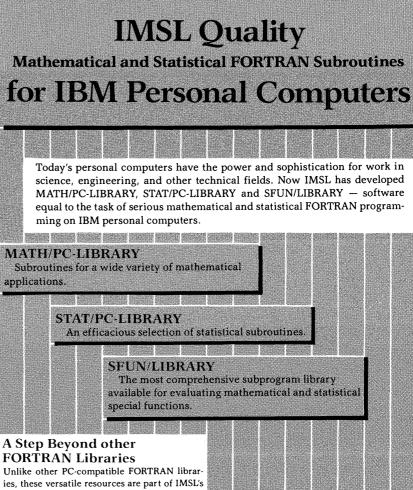
23 December 1983, Cathedral window/DNA molecule.

Combination of space covers in scroll format: 1 June 1979, 23 November 1979, 10 April 1981.

Price is \$5 each (prepaid).

Write to AAAS, Department POST, 1515 Massachusetts Avenue, NW, Washington, D.C. 20005.

1 MARCH 1985



Unike other PC-compatible FORTRAN inforaies, these versatile resources are part of IMSL's integrated system of FORTRAN libraries, offering a uniform approach to problem solving across a wide range of computer types and sizes. The IMSL libraries are ideally suited to today's multiple-computer environments, providing accurate results whether you're using your PC or a supercomputer.

With MATH/PC-LIBRARY, STAT/PC-LIBRARY and SFUN/LIBRARY you can select complete, thoroughly tested subroutines instead of writing them. You'll reduce development time, decrease maintenance costs, and enjoy the accuracy and dependability that have made IMSL a world leader in advanced numerical software systems.

World-Class Software Resources for Your PC

MATH/PC-LIBRARY and STAT/PC-LIBRARY contain the most frequently-used subroutines from the IMSL Library — a resource chosen by corporations, universities, research centers and governments in more than 50 countries. SFUN/LIBRARY offers a versatile set of subprograms for evaluating mathematical and statistical special functions.

Formerly available only for mainframes and minicomputers, these subroutines can now expand the programming capabilities of your personal computer.

MATH/PC-LIBRARY and STAT/PC-LIBRARY are available for IBM PC, PC XT, PC AT, and Portable PC systems running either IBM Professional FORTRAN or Microsoft FORTRAN 3.20. SFUN/LIBRARY is available only for IBM Professional FORTRAN environments.

oblem-Solving Software Systems For complete technical information, return this coupon to IMSL, NBC Building, 7500 Bellaire Boulevard, Houston, Texas 77036 USA. Telephone: (713) 772-1927. Telex: 791923 IMSL INC HOU. In the U.S. (outside Texas), call toll-free 1-800-222-IMSL Please send complete technical information □ MATH/PC-LIBRARY □ STAT/PC-LIBRARY □ SFUN/LIBRARY Name Dept. Title Organization Address City/State Code Area Code/Phone Telex Computer **Operating System** FORTRAN Compiler/Version SCI35 Copyright © 1985 IMSL

Circle No. 217 on Readers' Service Card

PROGRAM IN SOCIAL ECOLOGY Visiting Professor—Risk Assessment

The Program in Social Ecology of the University of California, Irvine, seeks a seniorlevel specialist in **risk assessment** to fill a oneor two-quarter position as a visiting professor.

Those who apply should have expertise in cost-benefit analysis or decision-analysis and be sufficiently conversant with the environmental sciences to interact knowledgeably with colleagues studying various environmental problems including noise, crowding, air and water pollution, occupational stress, and the regulation of environmental hazards. The ideal candidate will have some experience in the utilization of scientific knowledge in the formation of public policy. A substantive interest in factors affecting human health or medical decision-making is desirable, but not essential.

The Program will consider scholars from a variety of academic backgrounds (for example, economics, sociology, psychology, environmental or natural science, political science, law, mathematics, business and statistics), provided they possess the requisite methodological skills and are willing to interact with an interdisciplinary faculty.

The Program in Social Ecology is a multidisciplinary academic unit that offers the B.A., M.A., and Ph.D. The 27 full-time faculty include sociologists, psychologists, urban planners, public health specialists, and lawyers. The campus is located 40 miles south of Los Angeles and 5 miles from the Pacific Ocean, near the city of Newport Beach. Candidates should submit a brief letter and curriculum vitae to:

Professor Joseph F. Di Mento Director, Program in Social Ecology University of California Irvine, Calif. 92717

Closing date for applications is 31 March 1985. The University of California is an Equal Opportunity/Affirmative Action Employer.

ASSOCIATE PROFESSOR/PROFESSOR AND DI-RECTOR, GERIATRIC RESEARCH, EDUCATION AND CLINICAL CENTER—THE VETERANS AD-MINISTRATION MEDICAL CENTER AND DE-PARTMENT OF MEDICINE AT THE UNIVERSI-TY OF FLORIDA COLLEGE OF MEDICINE.

Applicants are requested for the position of director of the newly established Geriatric Research, Education and Clinical Center, in conjunction with the Veterans Administration Medical Center and the University of Florida College of Medicine. All individuals with an M.D. or Ph.D. degree with experience in research and geriatric medicine are encouraged to apply. This attractive academic position is a tenure-accruing appointment with the University of Florida College of Medicine with strong interdisciplinary relationships with many departments in the College of Medicine, other colleges at the University of Florida and the Veterans Administration Medical Center.

The applicants' experience should be in pharmacology with specific interest in therapeutics and geropharmacology. Experience and interest in internal medicine, neurology, family practice, community medicine, or psychiatry are acceptable.

medicine, or psychiatry are acceptable. The position will have overall responsibility for the geriatric patient care in the Geriatric Research Education and Clinical Center, as well as the responsibility for the research and multidisciplinary geriatric training programs. The research and education program and the clinical program will involve not only biomedical fields but also psychosocial as well as related professional fields. Salary is negotiable, commensurate with training and experience. The anticipated starting date is 1 July 1985.

Interested individuals should send their curriculum vitae by 15 March 1985 to:

J. Lee Dockery, M.D. Associate Dean Chairman, Search Committee Box J-215, JHMHC University of Florida College of Medicine Gainesville, Florida 32610

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

Personnel Placement

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

LINE CLASSIFIED ADVERTISING DEADLINES: 22 March issue (mailed 15 March): 1 March 29 March issue (mailed 22 March): 8 March 5 April issue (mailed 29 March): 15 March 12 April issue (mailed 5 April): 22 March

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

LINE DISPLAY (POSITIONS OPEN, COURSES, FEL-LOWSHIPS, MARKETPLACE, and so forth): \$11.40 per millimeter; \$285 minimum, per week (minimum charge covers 25 millimeters on a single column; 25 millimeters equals 10 lines of 50 spaces per line). No charge for use of box number. No agency commission for ads less than 103 millimeters (4 inches). No cash discount. Prepayment required for all foreign ads. Purchase orders and billing address required for all other advertising.

Send copy for all **Positions Wanted** ads and **Line Display** ads less than 1/6 page in size (125 millimeters) to:

SCIENCE, Room 107 1515 Massachusetts Avenue, NW Washington, D.C. 20005 Telephone: 202-467-4456

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

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

Blind ad replies should be addressed as follows:

Box (give number) SCIENCE 1515 Massachusetts Avenue, NW Washington, D.C. 20005

POSITIONS WANTED

Adjunct Teaching; two courses. Any physics or mathematics, selected biology topic. Location: within 150 miles of Kansas City. Immediate. Telephone: 816-531-3107. Box 22001, Kansas City, Mo. 64127. X

Anatomist/Cell Biologist, Ph.D. 1982; 3 years of postdoctoral experience; seeks tenure-track teaching and research position. Teaching expertise in all disciplines of anatomy and general biology. Research background in tissue culture, protein isolation and purification, membrane receptor studies and gene regulation. Available 1 July 1985. Box 54, SCIENCE. X

Aquatic Ecologist, B.Sc. marine biology/biochemistry, Ph.D. aquatic microbiology. Four years of experience in United Kingdom water pollution control authority. Environmental impact assessments of industrial and domestic pollution. Trace metal chemistry, benthic ecology, marine bacteriology, aquatic toxicology. Formulation/application of EQO's/ EQS's. Staff/laboratory/budget management. Lecturing experience. Seeks challenging research/teaching/management position. Government/industry/university. Box 56, SCIENCE. 3/1, 8

Biochemist (Ph.D.) seeks technical or laboratory management position in growing biotechnology company. Extensive research experience in protein chemistry and biochemical immunology, multilingual, excellent communication skills. Box 49, SCIENCE. X

Molecular Virologist. Ph.D. Produced monoclonal antibodies for detection and characterization of agriculturally significant plant and animal viruses. Experience includes ELISA, epitope mapping, RIA, Western blotting, immunoaffinity purification, cell culture, electron microscopy, serology, virus propagation, and rDNA. Publications/invited papers. Seeks challenging industrial or academic position. Box 55, SCIENCE. X

POSITIONS WANTED

Biologist, M.S. with 6 years of research experience, plus 5 years in data processing, seeks scientific programming position. Knowledge of Fortran and PL/1. Box 57, SCIENCE. X

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. 3/1, 8, 15

Film/Video Maker. Experience, publications in primatology, biopsychology. Ph.D. psychology, 1976. Teaching experience. Extensive travel in South America. Fluent Spanish. Seeks full-time position, consulting or free-lance work. G.P.O. Box 239, New York, N.Y. 10116.

POSITIONS OPEN

ACADEMIC EMERGENCY PHYSICIANS—The Section of Emergency Services, University of Michigan Medical Center, is recruiting a multidisciplinary faculty whose interest is in emergency care. There are openings at the instructor/assistant/associate professor levels. Specialty Board-certification or eligibility is required. Activities include: patient care, teaching at all levels, supervision of house staff, helicopter emergency care and transport, research and administration. Send curriculum vitae to: James R. Mackenzie, M.D., Head, Section of Emergency Services, Department of Surgery, C4020 Outpatient Building, University of Michigan Medical Center, 1405 East Ann Street, Ann Arbor, Mich. 48109. The University of Michigan is a nondiscriminatory, Affirmative Action Employer. PCNs 20,183,203.

ALGAL PHYSIOLOGICAL ECOLOGY. Assistant (tenure-track) or associate (tenured) professor. Position open 1 September 1985 for person in experimental limnology in both field and laboratory situations. Ph.D. in biological science required; salary open. Includes teaching in general biology, general limnology, and other appropriate courses; directing graduate students; developing active research program that would include collaborating in research at the ecosystem level. Deadline for application is 15 April 1985. Send curriculum vitae, complete college transcripts, statement of teaching, research, and professional goals, and three letters of recommendation to: Dr. Paul H. Monson, Department of Biology, University of Minnesota, Duluth, 10 University Drive, Duluth, Minn. 55812. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

ANATOMY AND MICROBIOLOGY FACULTY POSITIONS. Ph.D. microbiologist to teach secondyear medical students in immunology and virology and assist in teaching laboratories. Ph.D. anatomist to teach gross human anatomy to first-year medical students, including laboratory assistance. Primary interest in developing teaching excellence. Research encouraged, not mandatory. Departments of three to four Ph.D. members. All ranks of instructor (limited teaching experience), assistant or associate professor, will be considered. Salary commensurate with qualifications. Campus hospital. Preferred starting date: 1 July 1985. Send curriculum vitae plus names, addresses, and telephone numbers of three appropriate references by 15 March to: Dr. E. H. Whitten, Associate Dean, The University of Health Sciences-College of Osteopathic Medicine, 2105 Independence Boulevard, Kansas City, Mo. 64124. Telephone: 816-283-2402. Applications encouraged from all qualified persons.

Position available—**ASSISTANT PROFESSOR**, nontenure track, to work on the molecular genetics of *Chlamydia trachomatis*.

Emphasis to be placed on cloning of selected gene products and development of mutant strains. Starting salary: \$20,000 to \$25,000, depending on qualifications. Must have Ph.D. or equivalent and postdoctoral experience in bacterial genetics. Please send curriculum vitae and names of three references to: Robert B. Jones, M.D., Ph.D., Department of Medicine, EM 302, 545 Barnhill Drive, Indianapolis, Ind. 46223.

ACADEMIC THORACIC SURGEONS—The Department of Surgery, Section of Thoracic Surgery, at the University of Michigan Hospitals, is seeking Board-eetified or Board-eligible thoracic surgeons for open faculty positions (instructor through professor). Duties include participation in the clinical, research and teaching activities of the Section of Thoracic Surgery, both at the University and the Ann Arbor Veterans Hospitals. Minimum qualifications: Board-certification or -eligibility in thoracic disease, both general thoracic and cardiac; and leadership and administration qualities. Expertise in congenital heart disease, cardiac transplantation, mechanical cardiac assist devices, or esophageal surgery, and experience and interest in a research area related to thoracic surgery prefered. Apply to: Mark B. Orringer, M.D., Professor and Head, Section of Thoracic Surgery, University Hospitals, C707 OPB, Box 32, Ann Arbor, Michigan 48109. The University of Michigan is an Affirmative Action/

ANALYTICAL CHEMISTRY—Assistant professor. The Department of Chemistry of Seton Hall University anticipates one tenure-track position as of September 1985. Applications are invited from analytical chemists with demonstrated research excellence and a commitment to teaching at the graduate and undergraduate levels. The individual should complement the research areas of our faculty and participate in our B.S., M.S., and Ph.D. programs. Send a résumé, a brief description of future research plans, and the names of at least three references to: Faculty Search Committee, Department of Chemistry, Seton Hall University, South Orange, N.J. 07079. Seton Hall is an Affirmative Action/Equal Opportunity Employer and encourages applications from women and minority group candidates. This constitutes an extension of the earlier search for this position. Closing date for applications is 15 March 1985.

ASSISTANT/ASSOCIATE PROFESSOR Tenure-Track

Assist in teaching cell biology/histology to medical students in a 7-year innovative program leading to a combination B.S./M.D. degree. Additional teaching in neuroanatomy and neurohistology is highly desirable. Position to start 1 September 1985. A doctorate required; salary is competitive. The goals of the program are to increase primary care practice in urban communities throughout New York City and state. The school is committed to providing opportunities, women and students of varied ethnic backgrounds who wish to pursue a career in medicine. Deadline for application: 1 April 1985. Contact: Professor Mildred Gordon, School of Biomedical Education, The City College of City University of New York, Convent Avenue at 138th Street, New York, N.Y. 10031. An Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR IN BIOLOGY. A tenuretrack position with minimum qualifications of a Ph.D. Primary responsibilities include instruction of a core course in introductory cellular biology at the sophomore-junior level. Other responsibilities include participation in research and an M.S. graduate level program. Preference will be given to a background in vertebrate zoology emphasizing ethology, mammalogy, and/or evolutionary biology. Applicant should submit evidence of scholarship by publications, and potential to generate external funding for area of research. Department includes botany, zoology, and microbiology as areas of emphasis. Send, by 30 March 1985, letter of intent, curriculum vitae, and three reference letters to: Dr. Don Moll, Chairman, Search Committee, Department of Biology, Southwest Missouri State University, Springfield, Missouri 65804. An Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR Developmental Biology/Molecular Genetics Department of Anatomy, School of Medicine UNIVERSITY OF PENNSYLVANIA

Two tenure-track positions are available. Preference will be given to candidates applying modern techniques of molecular genetics to problems in developmental cell biology and developmental neurobiology. Teaching responsibility will be in gross anatomy. Prior teaching experience in gross anatomy is not essential. Send summary of current and future research plans, curriculum vitae, and names and addresses of three references to: Dr. Frank A. Pepe, Chairman, Department of Anatomy/G3, School of Medicien, University of Pennsylvania, Philadelphia, Pennsylvania 19104.

POSITIONS OPEN

THREE ASSISTANT PROFESSORSHIPS

The Department of Biological Sciences at the State University of New York at Albany (SUNYA) is seeking applicants for three 1-year nontenuretrack appointments at the assistant professor level. Applicants should have earned a Ph.D. and have postdoctoral training. One appointment will be made in each of these areas: MOLECULAR BIOLOGY-EUKARYOTIC MOLECULAR GENETICS, CELL BIOLOGY-CELL PHYSIOLOGY, and NEUROBI-OLOGY-PHYSIOLOGY. Appointees will teach undergraduate courses, participate in graduate training, and carry on research studies. Salary is negotiable. Appointments will be from 1 September 1983 to 31 August 1986. Please send curriculum vitae and three references to: Henry Tedeschi, Chair, Department of Biological Sciences, SUNY at Albany, 1400 Washington Avenue, Albany, New York 12222.

SUNYA is an Affirmative Action/Equal Opportunity Employer. Applications from minority persons, women, handicapped persons, and Vietnam veterans are especially welcomed.

MACDONALD COLLEGE OF McGILL UNIVERSITY DEPARTMENT OF PLANT SCIENCE

Applications are invited for two tenure-stream positions at the ASSISTANT PROFESSOR OR LEC-TURER level in horticulture. Salary commensurate with experience.

Position 1) Horticulturist, experienced in propagation and tissue culture, with an interest in ornamental plants; to teach at the undergraduate and graduate levels and conduct research.

Position 2) Horticulturist, experienced in greenhouse crop production, with an interest in nutrient related plant physiology; to teach at the undergraduate and graduate levels and conduct research.

Applicants for either position should hold, or expect to be granted, a Ph.D. in horticulture or a related subject. The appointment is to commence 1 June, or when a suitable candidate is selected. Closing date for applications is 1 April 1985. Those interested should send curriculum vitae and the names of three referees to: Dr. D. Buszard, Department of Plant Science, Macdonald College of McGill University, 21111 Lakeshore Road, Ste-Anne-de-Bellevue, Québec, Canada H9X 1C0. In accordance with Canadian immigration policy, consideration in the first instance will be given to Canadian citizens and permanent residents.

ASSISTANT PROFESSOR OF BIOCHEMISTRY

The Department of Biochemistry at the Unversity of Rochester School of Medicine and Dentistry invites applications for tenure-track faculty positions at the level of assistant professor. Candidates must have postdoctoral experience and an established record of research productivity. All research areas will be considered including protein structure and function. Applicants should send curriculum vitae, a statement of research interests, and names of three references to:

Chairman of Biochemistry University of Rochester School of Medicine and Dentistry Department of Biochemistry, Box 607 601 Elmwood Avenue Rochester, New York 14642

The University of Rochester is an Affirmative Action/Equal Opportunity Educational Institution, M/F.

ASSISTANT PROFESSOR (Developmental Biology/ Embryology). Tenure-track, 12-month appointment to begin 16 September 1985. Ph.D. required; postdoctoral experience preferred. Responsibilities include teaching an undergraduate course in vertebrate embryology and participating with other faculty in teaching vertebrate histology and micrology; developing a strong research program in developmental biology that is interactive with ongoing departmental programs; and directing graduate students. Letters of inquiry, curriculum vitae, official transcripts, reprints, research plans, and names, addresses, and telephone numbers of three references should be received by 15 April 1985. However, materials will be accepted until a suitable candidate is identified. Application materials should be forwarded to: Dr. John Pritchett, Professor and Head, Department of Zoology-Entomology, Auburn University, Auburn, Alabama 36849.

Auburn University is an Equal Opportunity/Affirmative Action Employer.

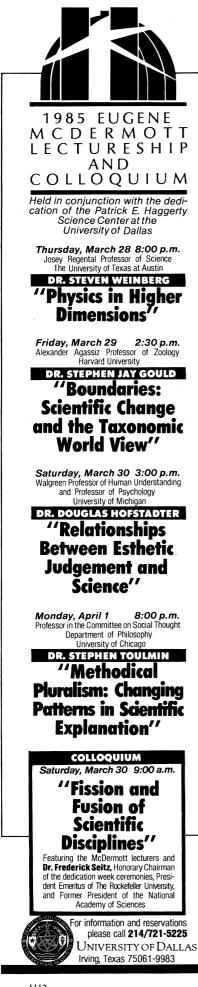
DIRECTOR OF ANIMAL CARE STAFF ASSOCIATE

The University of Massachusetts/Amherst is seeking a highly responsible individual to serve as Director of Animal Care. This individual will exercise day-to-day supervision of the University's dispersed animal facilities, plan and supervise training programs in laboratory animal care, and work with prin-cipal investigators and the University's consulting veterinarian to insure the health and well-being of the University's laboratory animal colonies. Minimum qualifications include a B.Sc. in animal science or its equivalent and 4 to 5 years of experience of its equiva-lent and 4 to 5 years of experience in labora-tory animal care at the supervisory level at a research facility and AALAS certification at the level of laboratory animal technologist OR a doctorate in veterinary medicine and 2 to 3 years of experience with laboratory animals in a research facility. Individuals should have complete familiarity with laboratory doctors and the second sec ratory animals and an understanding of fed-eral and state regulations which deal with animal welfare issues. The director reports to the Vice Chancellor for Research. Salary will be commensurate with qualifications and experience. Starting date will be as soon as practical. Applications must be post-marked by 1 April 1985. Please send résumé, proof of AALAS certification, and the proof of AALAS certification, and the names of three references to: Animal Care Director Search Committee, Office of Vice Chancellor for Research, Room A-217 Le-derle Graduate Research Center, University of Massachusetts, Amherst, Mass. 01003. An Affirmative Action/Equal Opportunity Em-ployer ployer.

THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT DALLAS Dean of the School of Allied Health Sciences

The University invites applications and nominations for the position of Dean of the School of Allied Health Sciences. The dean is the chief academic officer of the School and reports to the President of the Health Science Center. Appointment is planned for September 1985. Since its formation in 1943 as Southwestern Medical School, The University of Texas Health Science Center at Dallas has grown from a small medical college into a multi-faceted academic institution of nationally recognized excellence in the education of physicians, biomedical scientists, and health care personnel. The Health Science Center is contiguous with Parkland Memorial Hospital which has undergone a dramatic expansion of its physical facilities. Recent hospital improvements valued at more than \$90 million have made this teaching hospital a vital component of campus activities. In addition, the Health Science Center has established an international reputation in biomedical research.

The School of Allied Health Sciences currently enrolls 270 students in eight undergraduate and two graduate programs. These programs are: medical laboratory sciences, nutrition and dictetics, physical therapy, physician's assistant, prosthetic and orthotics, biomedical communications, rehabilitation counseling, allied health education, gerontology services, and rehabilitation sciences. The University is seeking a person of high academic achievement who combines vigorous leadership with demonstrated research and administrative skills, and an understanding of the broad range of disciplines within the school. Candidates must have an earned doctorate and a distinguished record in research and teaching. Qualifications necessary to hold a joint appointment in one of the departments of Southwestern Medical School would be viewed favorably. The University of Texas Health Science Center is an Affirmative Action Institution. Send curriculum vitae and names of three references to: William J. Gonyea, Ph.D., Chairman, Search Committee for Dean of the School of Allied Health Sciences, Department of Cell Biology, The University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, Texas 75235.



ASSISTANT PROFESSOR, GENOTOXICOLOGY. The Chemistry Department of the University of Maryland Baltimore County (UMBC) in conjunction with university-wide M.S., Ph.D. program in toxicology, seeks applicants for a tenure-track position in genetic toxicology. A strong background in biochemistry and chemistry is desirable. This position, subject to state funding, is available September 1985. The candidate is expected to develop a vigorous research program and teach graduate courses in the toxicology program. The department has 17 fulltime faculty with an ongoing record of excellence in research in such areas as biochemistry, toxicological chemistry and molecular biology. Applicants should submit a résumé and short description of future research plans, and arrange for three letters of reference to be sent to: Dr. Jack Schubert, Chairman, Genotoxic Search Committee, Department of Chemistry, UMBC, Catonsville, Md. 21228. UMBC/ is an Equal Opportunity/Affirmative Action Employer. We welcome applications from qualified women and minority candidates.

ASSISTANT/ASSOCIATE PROFESSOR OF IN-TERNATIONAL CROP PRODUCTION (agronomy, horticulture, soils, plant pathology, entomology, or agricultural engineering) tenure-track/tenured position, University of Wisconsin. Alternate 2-year assignments overseas with 6 years on campus. Initial assignment in The Gambia. International experience and foreign language desirable. Submit curriculum vitae, three references, and transcripts before 1 April 1985 to: Dr. K. Shapiro, 240 Agriculture Hall, University of Wisconsin, Madison, Wis. 53706. An Equal Opportunity/Affirmative Action Employer.

DEPARTMENT OF MICROBIOLOGY, UNIVERSI-TY OF GUELPH, invites applications for a tenuretrack position as ASSISTANT PROFESSOR. A Ph.D. degree and PDF or industrial experience required. The successful applicant is expected to develop a research program in fermentology or microbial diseases of fish. Competence in teaching microbial ecology and/or microfungi would be an asset. Applicants should send curriculum vitae and the names of three referees by 15 May 1985 to: Dr. K. F. Gregory, Chairman, Department of Microbiology, University of Guelph, Guelph, Ontario, Canada NIG 2W1. Position subject to final budgetary approval.

BARUCH COLLEGE/ CITY UNIVERSITY OF NEW YORK DEPARTMENT OF NATURAL SCIENCES

Applications are invited for a tenure-track position at the ASSISTANT PROFESSOR level. Teaching responsibilities will include general biology, ecology, and environmental science. Ph.D. biology, ecology/environmental science plus publications required. Baruch's program prepares students for careers in health sciences, medicine, science teaching, and ecology/environmental science. Minimum of three references. Reply by 1 April 1985 to: Chair, Department of Natural Sciences, Baruch College/The City University of New York, 17 Lexington Avenue, Box 502, New York, N.Y. 10010. An Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSORS—OPTOMETRY O.D. and/or Ph.D. degrees to teach basic and clinical sciences; tenure-track positions starting in August 1985. Submit curriculum vitae and list of names and telephone numbers of three referees to:

Dean Arthur J. Afanador School of Optometry Inter American University GPO 3255 San Juan, Puerto Rico 00936

ASSISTANT RESEARCH PHYSIOLOGIST OR POSTDOCTORAL FELLOW (Department of Medicine). Ph.D. with training in cell biology, molecular biology, or immunology as applicable to cultured intestinal epithelial cells and their functions. Research focuses on intestinal electrolyte secretion and regulatory mechanism with application to diarrhea, immune-related secretion and cystic fibrosis. Prefer outstanding candidates who foresee independent academic career in near future. Assistant research requires 2 years of postgraduate work and established bibliography. Salary set within University of California, San Diego (UCSD), research series scale. Apply by June 1985 to: Dr. Kiertisin Dharmasathaphorn, Department of Medicine, Division of Gastroenterology, H-811D, 225 Dickinson Street, San Diego, Calif. 92103. UCSD is an Equal Opportunity/ Afirmative Action Employer.

POSITIONS OPEN

Department of Zoology, North Dakota State University. Tenure-track position in PHYSIOLOGY at the ASSISTANT PROFESSOR level. Backgrounds in organ system physiology and/or endocrinology are preferred. Deadline for applications is 15 April 1985. Send curriculum vitae, bibliography, and letters from three references to: Jeffery W. Gerst, Ph.D., Search Committee, Department of Zoology, North Dakota State University, Fargo, N.D. 58105. An Equal Opportunity Employer.

ASSISTANT RESEARCH BIOLOGIST

Scripps Institution of Oceanography (SIO) invites applications for an assistant research biologist position. The incumbent will be expected to apply methods of optical remote sensing to the study of biological processes in the oceans. Strong interest in photobiology and in the generation of spectral signatures by plant pigments are important assets. The position will be sponsored by the Visibility Laboratory and will be at the assistant research biologist level (529,600 to \$37,400, commensurate with qualifications). Applicant should have a background in biological oceanography at the Ph.D. level or equivalent. Private foundation funding provides support for up to 2 years and is limited to U.S. citizens.

Submit résume, including names of three references, before 1 April 1985 to: R. W. Austin, Director, Visibility Laboratory, P-003, Scripps Institution of Oceanography, University of California, San Diego (UCSD), La Jolla, California 92093. Request position profile at the same address.

SIO/UCSD is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT RESEARCH BIOLOGIST

Applications are invited immediately for an assistant research biologist to work on a project entitled "Regulation of Plasmid DNA Replication." Responsibilities will include bacterial genetics involving conjugal transfer of plasmids; plasmid DNA isolation, quantitation and nucleotide sequence analysis; plasmid DNA constructions utilizing recombinant DNA techniques; in vitro and in vivo mutagenesis; in vitro DNA replication; protein purification utilizing affinity columns; protein-DNA binding and footprinting analysis; topoisomerase activity measurements; antibody preparation and antibody-antigen quantitative measurements; and electron microscopy analysis of DNA-protein interaction. Appointee must have a Ph.D. and background, including several years of postdoctoral experience, in the above techniques. Salary range: \$29,600 to \$37,400 per year. Send curriculum vitae and a brief statement of interest by 28 March to: Esther Avery, Search Committee, B-022, University of California, San Diego, La Jolla, Calif. 92093.

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

NATIONAL SCIENCE FOUNDATION (NSF)

NSF, Division of Ocean Sciences, is seeking qualified applicants for the position of ASSISTANT OR ASSOCIATE PROGRAM DIRECTOR for the Physical Oceanography Program. The position is in the excepted service and will be filled on a 1- or 2year rotational or temporary basis. The per annum salary range for the temporary position assignment is: grade 12, \$31,619 to \$41,105; grade 13, \$35,599 to \$48,876; or, grade 14, \$44,430 to \$57,759. The rotator candidate receives a leave of absence from his/ her employer and salary is set in accordance with NSF's Circular Number 167, Rotator Program. The salary range for the rotator assignment is: assistant program director, \$40,000 to \$50,000 and associate program director, \$40,000 to \$60,000. The program provides support for scientists primarily from academic institutions to pursue fundamental research in physical oceanography. The selected candidate will carry out program planning, proposal evaluation, administration of research grants, and liaison with other federal agencies. Applicants should have a Ph.D. or equivalent

Applicants should have a Ph.D. or equivalent experience in physical oceanography or a closely related physical science. Additional successful scientific research or equivalent experience beyond the Ph.D. is as follows: for the assistant program director (grade 12–13), 1 to 3 years, and for associate program director (grade 14), 4 to 6 years. Field experience in an academic institutional program is highly desirable.

For information on how to apply, telephone: Catherine Handle at 202-357-7840. Hearing-impaired individuals should call 202-357-7492. NSF is an Equal Opportunity Employer.

ASSOCIATE PROFESSOR OF PHARMACOLOGY

Associate professor, associate pharmacologist re-sponsible for the direction of a new toxicology program currently being established. Required to maintain in vitro murine and human cell culture maintain in vitro murine and numan cell culture systems as well as maintain murine leukemia and solid tumors in vivo for drug testing purposes. Required to determine LD_{10} , LD_{50} , LD_{50} , values, assess organ-specific toxicities, and evaluate the therapeutic index of potential antitumor drugs. Maintain an independent funded laboratory research program involved with some relevant aspects of anticancer pharmacology and toxicology. Must have a working knowledge of clinical pharmacokinetic determinations, inorganic metal drug therapy and be skilled of rupping comis chearaction pharmacokinetic determinations, inorganic metal drug therapy and be skilled at running atomic absorption analyses. Ph.D. degree in biochemical pharmacology and/or toxicol-ogy or equivalent with 3 years of experience; 40-plus hours per week; \$40,000 annual salary. Apply at: Texas Employment Commission, Houston, Texas, or send résumé to: Texas Employment Commission, TEC Building, Austin, Texas 78778, J.O. Number 3660968. Ad paid by an Equal Opportunity Employ-er.

NATIONAL SCIENCE FOUNDATION (NSF)

NATIONAL SCIENCE FOUNDATION (NSF) NSF, Division of Polar Programs, is seeking quali-fied applicants for the position of ASSOCIATE PRO-GRAM MANAGER, Polar Biology and Medicine Program. This position will be filled either in the competitive civil service or excepted service at grade GS/GG-14, \$44,430 to \$57,759 per annum. Applicants should have a Ph.D. in one of the biologi-cal sciences plus several years of research experi-ence. Experience or familiarity with current polar research is highly desirable. The person selected for this position must be able to pass the physical examination required for travel to Antarctica. This position will be open until filled. For information on how to apply, telephone: Stuart Solomon at 202-357-7840. Hearing-impaired individuals should call 202-357-7892. For further information, contact: Dr. Francis S. L. Williamson, Chief Scientist, Division of Polar Pro-grams, telephone: 202-357-7894. NSF is an Equal Opportunity Employer.

NATIONAL SCIENCE FOUNDATION (NSF)

NSF, Division of Biotic Systems and Resources, is seeking qualified applicants for the position of ASSOCIATE PROGRAM DIRECTOR for the Systematic Biology Program. The position is in the excepted service and will be filled on a 1- or 2-year excepted service and will be filled on a 1- or 2-year rotational or temporary basis. The temporary assign-ment is made at grade 14, \$44,430 to \$57,759 salary range. The rotator candidate receives a leave of absence from his/her employer and salary is set in accordance with NSF's Circular Number 167, Rota-tor Program. The salary range for the rotator assign-ment is \$35,000 to \$55,000. The associate program director assists in the responsibility for planning and management of the program and provides technical leadership and guidance for a segment of the pro-gram in connection with the initiation and support of research and research-related activities in systematresearch and research-related activities in systematic biology

Applicants should have a Ph.D. or equivalent experience in systematic biology. In addition, 4 to 6 years of successful scientific research and adminis-tration experience beyond the Ph.D. is required.

For information on how to apply, telephone: Catherine Handle at 202-357-7840. Hearing-impaired individuals should call 202-357-7492. NSF is an Equal Opportunity Employer.

NATIONAL SCIENCE FOUNDATION (NSF)

NATIONAL SCIENCE FOUNDATION (NSF) NSF, Division of Polar Programs, is seeking quali-fied applicants for the position of **PROGRAM MAN-AGER**, Polar Earth Sciences Program. This position will be filled either in the competitive civil service or excepted service at grade GS/GH-15, \$52,262 to \$67,940 per annum. Applicants should have a Ph.D. in one of the earth sciences plus several years of research experience. A broad general knowledge of the field, experience or familiarity with current polar research, and administrative experience are also required. The person selected for this position must be able to pass the physical examination required for travel to Antarctica. Applications must be received by 1 April 1985. For information on how to apply, **telephone: Stuart Solomon at 202-357-7840**. Hearing-impaired individuals should call **202-357-7840**. Hearing-impaired individuals should call **202-357-7840**. Lee-phone: **202-357-7894**. NSF is an Equal Opportunity Employer.

POSITIONS OPEN

ASSOCIATE SECTION HEAD, HEMATOLOGY/ ONCOLOGY. The Department of Medicine in Michigan State University (MSU), College of Hu-man Medicine, is seeking a qualified full-time faculty member with a primary interest in oncology for appointment at the associate professor or professor level. M.D. degree required. Must have a commit-ment to teaching and strong interest in research and be Board-certified/eligible. Faculty will be associate section head of hematology/oncology with responsi-bility for oncology. Appointment open 1 April 1985. Applications due immediately. Please address in quiries with copy of curriculum vitae to: John A. ASSOCIATE SECTION HEAD, HEMATOLOGY/ Applications due immediately. Please address in-quiries with copy of curriculum vitae to: John A. Penner, M.D., Professor, Department of Medicine, B-220 Life Sciences Building, Michigan State University, East Lansing, Michigan 48824-1317. Telephone: 517-353-3730. MSU is an Equal Opportunity/Affirmative Action Employer. HM429.

NATIONAL SCIENCE FOUNDATION (NSF)

NATIONAL SCIENCE FOUNDATION (NSF) NSF, Division of Ocean Sciences, is seeking qualified applicants for the position of **PROGRAM DIRECTOR** for the Biological Oceanography Pro-gram. The position is in the excepted service and will be filled on either a permanent, rotator, or temporary basis. The per annum salary range for the permanent or temporary position will be at the GH-15 level, \$52,262 to \$67,940. The salary range for the rotator position will be \$45,000 to \$70,000 (currently limited by statute to \$68,700). The rotator candidate receives a leave of absence from his/her employer and salary is set in accordance with NSF's Circular Number 167, Rotator Program. The Biological Oceanography Program provides support for scien-tists primarily from academic institutions to pursue fundamental research in biological oceanography. tists primarily from academic institutions to pursue fundamental research in biological oceanography. The selected candidate will carry out program plan-ning, proposal evaluation, administration of re-search grants, and liaison with other federal agen-cies. Applicants should have a Ph.D. or equivalent experience in biological oceanography or a closely related biological science. In addition, 6 to 8 years of successful scientific research beyond the Ph.D. is required. Field experience in an academic institu-tional program is highly desirable. For information on how to apply, **telephone: Catherine Handle at 202-357-7840**. Hearing-impaired individuals should call **202-357-7492**. NSF is an Equal Opportunity Employ-er.

NATIONAL SCIENCE FOUNDATION (NSF)

NSF, Division of Chemistry, is seeking qualifed applicants for **PROGRAM DIRECTOR POSITIONS** in Inorganic Chemical Dynamics; Analytical Separa-tions and Measurements; Theoretical Chemical Physics; Synthetic Organic Chemistry; and Chemi-cal Instrumentation for 1985–1986. The positions are in the excented service and will be filled on others. in the excepted service and will be filled on a 1- or 2-year rotational or temporary basis. The per annum salary range for the temporary positions will be at the GG/GH-15 level, \$52,262 to \$67,940. The salary range for the rotator positions will be \$45,000 to \$70,000 (currently limited by statute to \$68,700). The rotator candidate receives a leave of absence from his/her employer and salary is set in accordance with NSF's Circular Number 167, Rotator Program. The incumbents of these positions will administer pro-grams for basic research grant support including Incumbents of these positions will administer pro-grams for basic research grant support, including advising applicants, reviewing proposals, and other administrative duties. Applicants should have a Ph.D. or equivalent experience. In addition, 6 to 8 years of successful scientific research experience. For information on how to apply, telephone: Cath-erine Handle at 202-357-7840. Hearing-impaired indi-viduals should call 202-357-7492. NSF is an Equal Opportunity Employer.

Opportunity Employer.

NATIONAL SCIENCE FOUNDATION (NSF)

NATIONAL SCIENCE FOUNDATION (NGF) NSF, Division of Polar Programs, is seeking quali-fied applicants for the position of ASSOCIATE PRO-GRAM MANAGER, Polar Earth Science Program. This position will be filled either in the competitive civil service or excepted service at grade GS/GH-14, \$44,430 to \$57,759 per annum. Applicants should have a Ph.D. in one of the earth sciences plus several years of research experience. Experience or familiarity with current polar research is highly desirable. The person selected for this position must be able to pass the physical examination required for travel to Antarctica. Applications must be received be able to pass the physical examination required tor travel to Antarctica. Applications must be received by 1 April 1985. For information on how to apply, telephone: Stuart Solomon at 202-357-7840. Hearing-impaired individuals should call 202-357-7492. For further information, contact: Dr. Francis S. L. Williamson, Chief Scientist, Division of Polar Pro-grams, telephone: 202-357-7894. NSF is an Equal Opportunity Employer.

Symposium and Workshop on Enzyme and Protein Immobilization

Tufts University June 17, 18 & 19, 1985 Medford, Massachusetts 02155

The Program is designed for chemists, biologists, biochemists, microbiologists, and chemical and biochemical engineers who want to gain insight into this important field. The format includes introductory lectures, an industrial applications symposium, and a hands-on laboratory workshop. Participants may attend the lecture and symposium only, or the entire program.

Course Faculty

Charles L. Cooney Massachusetts Institute of Technology Alan Gertstein Pharmacia George G. Guilbault University of New Orleans Allan Jarvis Damon Biotech Alexander Klibanov Massachusetts Institute of Technology Mark Parham Amicon Corporation Albert Robbat Tufts University David Rozzell Genetics Institute K. Venkat Hubinger Company David R. Walt Tufts University

For more information write: **Tufts University**

Conference Bureau Medford, MA 02155 or call (617) 381-3568

BASIC RESEARCH **RELATED TO ATHEROSCLEROSIS**

A postdoctoral position is available at The Hormel A postdoctoral position is available at The Hormel Institute, University of Minnesota, through a train-ing grant awarded by the U.S. Public Health Service National Heart, Lung, and Blood Institute. The program is intended to provide research training in areas of lipid biochemistry, membrane biophysics, and cell biology related to cardiovascular disease. Participating faculty members are: Drs. W. J. Bau-mann, H. L. Brockman, M. P. Cleary, R. T. Hol-man, D. R. Pfeiffer, O. S. Privett, H. Schlenk, and H. H. O. Schmid. Applicants select a faculty spon-sor specialized in their area of research interest. Collaboration with other faculty members is encour-aged. aged.

Appointments are annually renewable. Applicants Appointments are annually renewable. Applicants must be U.S. citizens, noncitizen nationals, or per-manent U.S. residents with a Ph.D., M.D., or equiv-alent degree. Applications should include curricu-lum vitae, list of publications, and the names of three references. Submission deadline: 1 April 1985, For further information or to apply, write to: Dr. R. T. Holman, Professor and Director, The Hormel Insti-Holman, Protessor and Director, the Hormer Inst-tute, University of Minnesota, Austin, Minn. 55912. Telephone: 507-433-8804. The University of Minne-sota is an Equal Opportunity Educator and Employ-er and specifically invites and encourages women and minority applicants.

BIOCHEMISTRY. Research assistant professor. Conduct research on the mechanisms of hormone action. Ph.D. in biochemistry and 4 years of post-doctoral experience required. Strong background in the study of calcium homeostasis, inositol lipids, protein purification, and subcellular fractionation required. Send curriculum vitae and three letters of memory of the department obsirmer. Dr recommendation to the department chairman: Dr. Franz Matschinsky, University of Pennsylvania, School of Medicine, Department of Biochemistry-Biophysics, Philadelphia, Pa. 19104. Deadline for applications: 31 March 1985. University of Pennsyl-vania is an Affirmative Action/Equal Opportunity Fundows Employer.

CELL BIOLOGIST/CELL PHYSIOLOGIST. A 3 year term appointment beginning 1 September 1985 as assistant professor is available in the Department of Biological Sciences, State University College at Brockport. Duties will include teaching cell biology and selected portions of a Biotechnology Program to undergraduates and graduates. In addition, there will be some teaching involvement in the cell physi-ology area. The applicant should be actively carryology area. The applicant should be actively carry-ing out a research program in the area of cell biology or cell physiology. Applicant must have an earned Ph.D. in biological sciences—cell biology/cell physi-ology, some teaching experience, and evidence of scholarly potential. This is a tenure-track position. Send résumé and three letters of reference by 10 April 1985 to: Office of Faculty and Staff Relations, 4th Floor Administration Building, State University College at Brockport, Brockport, N.Y. 14420. The State University of New York is an Equal Opportunity/Affirmative Action Employer.

NATIONAL SCIENCE FOUNDATION (NSF)

NSF, Division of Molecular Biosciences, is seek ing qualified applicants for the position of **PRO-GRAM DIRECTOR** for the Metabolic Biology Program. The position is in the excepted service and will be filled on a 1- or 2-year rotational or temporary basis. The salary range for the rotator position is \$45,000 to \$70,000 (currently limited by statute to \$68,700). The rotator candidate receives a leave of absence from his/her employer and salary is set in accordance with NSF's Circular Number 167, Rotaaccordance with NSF's Circular Number 167, Rota-tor Program. Candidates not on a leave of absence from an employer will receive salary equivalent to GS-15. Applicants should have a Ph.D. or equivalent experience. In addition, 6 to 8 years of successful scientific research or equivalent experience beyond the Ph.D. is required. A broad understanding of biochemistry and physiology of microbes, plants, and animals is required. Research experience should be relevant to the biochemical mechanism by which be relevant to the biochemical mechanism by which organisms assimilate and transform metabolites, provide energy for vital processes, and respond to environmental change. Experience in writing and evaluating research proposals and research results, and in administration of science activities is highly desirable. desirable.

For information on how to apply; telephone: Catherine Handle at 202-357-7840. For technical information concerning the position, contact: Dr. James H. Brown, Director, Division of Molecular Biosciences, telephone: 202-357-9400. Hearing-impaired individ-uals should call 202-357-7492. NSF is an Equal Opportunity Employer.

POSITIONS OPEN

BIOCHEMICAL TOXICOLOGIST. Assistant **BIOCHEMICAL TOXICOLOGIST.** Assistant professor of environmental toxicology and assistant biochemical toxicologist in the Agricultural Experi-ment Station available on or before 1 July 1985. Eleven-month, tenure-track appointment; 25 per-cent teaching/75 percent research. Requirements in-clude Ph.D. in biochemistry, pharmacology, toxicol-ogy, or related discipline with strong biochemical training, and research experience in biochemical toxicology involving plants and/or animals. Respon-sibilities include research on mechanisms of toxic action as related to agricultural and environmental concerns, teaching the equivalent of two formal concerns, teaching the equivalent of two formal courses/year, and advising and supervision of under-graduate and graduate students. By 15 April 1985, send résumé, transcripts (official transcripts if the Ph.D. was in the past 5 years), list of publications, and names and addresses of three references to: Chairman, Search Committee, Department of Envi-ronmental Toxicology, University of California, Davis, Calif. 95616.

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

BIOLOGICAL OCEANOGRAPHY

The Department of Marine Science invites applications for a position in biological oceanography for 1986–1987. The position is tenure-track, with a 9-month appointment. Date of employment: 8 August Areas of special biological interest include fisher-

ies biology/ichthyology and macrophyte biology. The successful candidates will be expected to

obtain funding and publish while actively participat-ing in a research-oriented department. Résumé and the names of three references should

be sent to:

Dr. Norman J. Blake Chairman, Search Committee University of South Florida Department of Marine Science 140 Seventh Avenue South St. Petersburg, Florida 33701

The University of South Florida is an Affirmative Action/Equal Opportunity Institution. Closing date for applications is 1 May 1985.

EXTENSION RESEARCH FORESTER

Assistant professor, tenure-track faculty position, 75 percent extension, 25 percent research. Extension responsibilities include developing forestry programming for both rural and urban residents, serving as the departmental leader for 4-H and youth programs in forestry and available and substances and s grams in forestry, and coordinating extension pro-grams in forestry and wildlife. Research program should center on forest ecology relevant to Nebraska and the Great Plains area and should complement and be integrated with existing departmental re-search efforts. Salary commensurate with qualifica-tions and competitive. Requires a Ph.D. in forestry. Some actual work experience in extension forestry preferred. Apply with letter of application, complete résumé, academic transcripts, and the names of three individuals who may be contacted for profes-sional references by 15 April to: Dr. Gary L. Hergen-rader, Head and State Forester, Department of Forestry, Fisheries, and Vildlife, Institute of Agriculture and Natural Resources, University of Nebraska-Lin-coln, 101 Plant Industry, Lincoln, Nebraska 68583– 0814. Affirmative Action/Equal Opportunity Employer

GEOLOGICAL OCEANOGRAPHY

The Department of Marine Science invites applications for a position in geological oceanography for 1986–1987. The position is tenure-track, with a 9month appointment. Date of employment: August 1986. Salary and rank are open. Areas of special geologic interest include petrolo-

gy, marine sedimentology/stratigraphy, sedimentary geochemistry, mineralogy, and geophysics. The successful candidates will be expected to obtain funding and publish while actively participat-ing in a research-oriented department. Résumé and the names of three references should

be sent to:

Dr. L. J. Doyle Chairman, Search Committee University of South Florida Department of Marine Science 140 Seventh Avenue South St. Petersburg, Florida 33701

The University of South Florida is an Affirmative Action/Equal Opportunity Institution. Closing date for applications is 1 May 1985.

POSITIONS OPEN

BIOLOGICAL RESEARCH TECHNICIAN

THE ENVIRONMENTAL LABORATORY at the U.S. Army Corps of Engineers, Waterways Experi-ment Station (WES), is accepting Intergovernmental Personnel Act Mobility Program (IPA) applications rensonnel Act Mobility Program (IFA) applications from college/universities, federal, state, and local government employees for assignment to the Algae and Aquatic Plant Research Team. Assignment is for 2 years with possible extension for an additional 2 years. Applicant should have a B.S. or M.S. degree in a biologically related area or in environmental obamictry with a strong lobrater and uniting back chemistry, with a strong laboratory-analytical background.

The individual selected for assignment will remain an employee of his/her institution, which will be reimbursed fully for salary and fringe benefits, in-cluding relocation expenses (per federal government guidelines), related to assignment. Applications should be forwarded to: Dr. John Barko, WES-Environmental Laboratory, P.O. Box 631, Vicks-burg, Mississippi 39180-0631. For further informa-tion, telephone: 601-634-3654.

CANCER RESEARCH SCIENTISTS AND TECHNICIANS

Monoclonal Antibody Production. Generation, screening, and cloning of hybridomas; production, purification, and characterization.

Immunocompetence Evaluation. Tissue culture, cellular cytotoxicity against tumor cells; purification and evaluation of lymphocyte subsets and lympho-kine responsiveness; cryopreservation of functionally active cells; clonogenic assay for tumor cells.

Protein Biochemistry. Purification and characteriza-tion of monoclonal antibodies and cytokines includ-ing column chromatography, HPLC, and electrophoresis.

Small Animal Care and Manipulation. Caging, handling, minor surgical manipulations and injections of mice, rats, guines pigs, and so forth; tissue prepara-tion for histology; tumor implantation and tumor growth measurements; necropsy work.

Laboratory Maintenance. Equipment evaluation and repair; stockroom ordering and receiving; glassware cleaning and sterilization; washroom operation: util-ities monitoring; radiation waste disposal; radiation safety and laboratory safety compliance.

Send curriculum vitae/résumé: Robert K. Oldham, M.D., Biotherapeutics, Inc., Riverside Drive, Frank-lin, Tenn. 37064.

Ph.D. IN CELL BIOLOGY

EG&G Mason Research Institute has an opening for a Ph.D. with 3 years of experience in tissue culture techniques, with interests in in vitro immunological techniques and/or in vitro carcinogenesis. We offer an attractive salary and benefit package with an opportunity for professional growth. Send résumé, references, and a brief summary of

your experience to:

Donna L. Perron, Personnel Manager EG&G Mason Research Institute 57 Union Street Worcester, Mass. 01608 An Equal Opportunity Employer

CHEMIST—A tenure-track faculty position is available 1 July 1985. A Ph.D. in chemistry or biochemistry is required. Applicant should have postdoctoral experience and demonstrated excellence in conducting research in the conjugation, synthesis of conju-gating compounds, and testing of monoclonal anti-bodies for reactivity and specificity following conju-gation. Send curriculum vitae and the names of three gation. Send curriculum vitae and the names of three references by 1 April 1985 to: Dr. Allen Lichter, Department of Radiation Therapy, University of Mich-igan Medical School, 1405 East Ann Street, Ann Arbor, Michigan 48109. The University of Michigan is a nondiscriminatory, Affirmative Action Employer. Code 12.

FACULTY POSITION-The Department of Physiological Optics is seeking a vision scientist for a faculty position at the assistant or associate professor level. The successful candidate will be expected to teach professional level and graduate level courses in areas related to eye movements. Candi-dates should have a Ph.D. in a related discipline, postdoctoral experience, and a strong record of accomplishment in research. Application should be made before 10 May 1985. Send curriculum vitae to: Dr. Graeme Wilson, Department of Physiological Optics, School of Optometry, The University of Ala-bama at Birmingham, Birmingham, Alabama 35294. An Affirmative Action/Equal Opportunity Employer

KEAN COLLEGE OF NEW JERSEY UNION, NEW JERSEY Dean of Natural Sciences, Nursing, and Mathematics SEARCH EXTENDED

Kean College of New Jersey is seeking candidates for the position of Dean of Natural Sciences, Nursing, and Mathematics. The dean reports to the Vice President of Academic Affairs and is responsible for the development and administration of plans to meet the needs of students served by the School of Natural Sciences, Nursing, and Mathematics and for the fostering of excellence in programs, instruction, and research.

Kean College of New Jersey is a multipurpose state college with graduate and undergraduate programs and an enrollment of approximately 13,000 students. It is located on a 150-acre campus in Union Township and Hillside.

The dean is a member of the Council of Deans and working within the context of shared governance, participates in the formulation, evaluation, and administration of college policies and procedures.

Candidates must hold the minimum of a Ph.D. in an academic discipline related to the School of Natural Sciences, Nursing, and Mathematics or other appropriate area. Educational administrative experience at a policy level in a public 4-year college or university and a commitment to participative management are highly desired. A minimum of 5 years of college teaching experience is required.

Salary range: \$40,282 to \$54,373. Comparable fringe benefits. Salary is negotiable based on qualifications, experience, and previous salary. Position is available 1 July 1985.

Applicants should submit résumé and statements describing their qualifications, and a written statement indicating their administrative philosophy and views on major issues in higher education. They should also have three letters of reference and graduate transcripts sent to:

Dr. A. Bryan Lees, Chairperson Search Committee for the Dean of Natural Sciences, Nursing, and Mathematics

Nursing, and Mathematics Room T—130 Kean College of New Jersey Union, New Jersey 07083

All materials must be received by 22 March 1985. Minority and women candidates encouraged to apply. An Equal Opportunity/Affirmative Action Employer

INFORMATION SCIENTIST (Chemical)

Ayerst Laboratories, a subsidiary of Fortune 100 American Home Products, has opened a state-of-the-art research facility in Princeton, New Jersey.

To assist in this greatly expanded research activity, we are seeking an Information Scientist (Chemical). Candidates should possess a minimum of a BS degree in Chemistry, with experience in searching chemical data bases, particularly Chemical Abstracts and Derwent World Patents Index. Knowledge of systematic nomenclature of organic compounds is also a requisite. The selected candidate will also be responsible for disseminating chemical information to research personnel.

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

Personnel Manager



Assistant Scientists & Associate Scientists

Explore a position today with the industry of the future.

CIBA-GEIGY's Agricultural Division has opportunities at its new Biotechnology Facility in Research Triangle Park, North Carolina.

Positions are currently available for Assistant and Associate Scientists with a BS/MS degree in Microbiology, Biochemistry or Chemistry and with at least 2 years experience in one of the following areas of research: microbiology, plant tissue culture, molecular biology, protein chemistry, recombinant DNA or site directed mutagenesis.

Please forward resumes to: Dr. Mary-Dell Chilton, CIBA-GEIGY Biotechnology Research Facility, P.O. Box 12257, Research Triangle Park, North Carolina 27709. An equal opportunity employer m/f/h/v.



ROCKEFELLER FOUNDATION BIOTECHNOLOGY CAREER FELLOWSHIPS

The Rockefeller Foundation announces a program of career development fellowships designed to enable scientists from developing countries, trained at outstanding centers for advanced research in biotechnology, to continue to work at those or other institutions for three months each year, over a period of at least three years, conducting advanced research and keeping abreast of new developments in their fields. The program will focus upon the development and application of advances in molecular and cellular biology and immunology relevant to agriculture, health, and reproductive biology.

Funding will be shared between the Foundation and the host laboratory, with the Foundation providing travel and per diem support. It is hoped that the fellowships will encourage the establishment of ongoing working relationships between outstanding younger scientists working at third world institutions, and research teams at advanced laboratories.

Applicants to this program should have at least Ph.D.- or M.D.-level training, a proven record of scientific productivity, and a permanent position at a research or teaching institution in their home country. A written project proposal must be developed and submitted jointly by the candidate and the laboratory sponsor.

Information about application procedures can be obtained by writing to Biotechnology Career Fellowships, Fellowship Office, Rockefeller Foundation, 1133 Avenue of the Americas, New York, New York 10036, USA.

UNIVERSITY OF GUELPH DEPARTMENT OF NUTRITION CHAIRPERSON

The University of Guelph is seeking a chairman for the Department of Nutrition. Candidates should have an outstanding record of research achievement and interest in promoting high standards in teaching at the undergraduate and graduate levels. The department has ten full-time faculty members who who carry out basic research from the molecular level to the whole animal using a wide variety of animal species. Research areas include nutritional aspects of metabolism, food quality, toxicology, immunolo-gy, and metabolic diseases. The department offers an undergraduate program in nutrition and biochem-istry along with a graduate program leading to M.Sc. and Ph.D. degrees.

The University is located in the town of Guelph located approximately 50 miles west of Toronto and has a student population of more than 11,000 under-graduates and 1,030 graduate students.

In accordance with Canadian Immigration requirements priority will be given to Canadian citizens and permanent residents of Canada. This position is subject to final budgetary approval.

Interested candidates should submit curriculum vitae, list of publications, and the names of three referees before 30 April 1985 to:

Bruce H. Sells, Dean College of Biological Science University of Guelph Guelph, Ontario, Canada N1G 2W1

CLINICAL PSYCHOLOGIST/DIRECTOR OF AL-COHOL RESEARCH INSTITUTE. Applications are being accepted for a tenure-track position to com-mence August 1985. Rank appropriate to back-ground and experience. A strong background in clinical and research training and a solid record of research and extramural support in the area of substance abuse are required. The faculty member will teach undergraduate and arcduate students and will teach undergraduate and graduate students, and supervise graduate research and clinical activities as supervise graduate research and clinical activities as a member of the A.P.A. approved Clinical Training Program as well as serve as the director of the Center for Alcohol Research. Send application, cur-riculum vitae, and three reference letters before 15 March 1985 to: Dr. R. Douglas Whitman, Depart-ment of Psychology, Wayne State University, Detroit, Mich. 48202. Equal Opportunity/Affirmative Action Employee Employer.

DEAN OF SCIENCE PURDUE UNIVERSITY

Nominations and applications are invited for the position of Dean, School of Science, Purdue Univer-sity. The School of Science is comprised of the Departments of Biological Sciences, Chemistry, Computer Sciences, Geosciences, Mathematics, Physics, and Statistics.

Candidates must have an earned doctorate in one of the sciences, a record of scholarly achievement, and qualify for a tenured full professorship in one of the seven departments of the School of Science. Successful academic managerial experience is re-quired. The dean is expected to have excellent interpersonal skills and provide vision and effective leadership in maintaining academic excellence in research and teaching. research and teaching.

Applications should be received by 18 March and should be sent to: Felix Haas, Executive Vice Presi-dent and Provost. Purdue University. West Lafavette.

Purdue University is an Equal Opportunity/Affirmative Action Employer and encourages applica-tions from members of minority groups.

TENURE-TRACK ECOLOGIST

Assistant professor of biology, beginning September 1985. The Department of Biological Sciences seeks an animal ecologist with strong quantitative skills that include computerized assisted data analysis. Will teach in Introductory Biology Program, upper division and graduate courses, and develop an effec-tive research program in which graduate students (M.S.) can become involved. Special consideration given to applicants with documented teaching effectiveness in entomology and/or aquatic/wetlands ecology. Submit curriculum vitae, statement of re-Search plans, and three letters of reference to: Dr. John C. Belton, Chairman, Department of Biological Sciences, California State University, Hayward, Calif. 94542, by 12 April 1985.

Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

CHANCELLOR HEALTH SCIENCES CENTER UNIVERSITY OF COLORADO

The University of Colorado Health Sciences Center in Denver, which includes the Schools of Dentis-try, Medicine, and Nursing, as well as the Universi-ty Hospitals, is seeking a chancellor. That individual will be the chief automatic and administrative officer of the campus, and will report directly to the President of the University and the Board of Regents.

uent of the University and the Board of Regents. An earned doctorate or equivalent degree is desir-able, as well as experience in scientific and/or health related activities. Candidates must possess out-standing leadership qualities in the areas of educa-tion, research and delivery of health care. An under-standing of the environment of a public educational institution is essential. Applications should be ac-companied by complete curriculum vitae as well as a list of references with addresses. list of references with addresses.

Nominations and applications must be received by 30 April 1985 and should be sent to:

Stuart A. Schneck, M.D., Chairman

Chancellor's Search Committee University of Colorado Health Sciences Center 4200 East 9 Avenue, Box C-269 Denver, Colorado 80262

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

DEAN SCHOOL OF VETERINARY MEDICINE

Purdue University seeks nominations and applica-tions for the position of Dean of the School of Veterinary Medicine.

The School of Veterinary Medicine is currently celebrating its silver anniversary and has widely recognized programs in professional and graduate education, research, and veterinary specialty train-ing. Enrollment in the D.V.M. program is 240 with 65 graduate students and clinical residents and 70 feasible. faculty. Purdue University is a land grant university with 32,000 students and internationally distinguished programs in engineering, agriculture, and science.

An earned doctor of veterinary medicine or equivalent degree is required. Research experience, spe-cialty certification, and administrative experience with major responsibility in a university veterinary program are desirable.

Applications and nominations should be sent by 31 March 1985 to: Dr. Felix Haas, Executive Vice Presi-dent and Provost, Hovde Hall, Purdue University, West Lafayette, Indiana 47907.

Purdue University is an Equal Opportunity/Affirmative Action Employer and encourages applications from members of minority groups.



ECOSYSTEM SCIENTIST

The Department of Landscape Architecture and Regional Planning seeks a Ph.D. with teaching abili-ty in ecology and some background in either soil science or hydrology. The appointment will be a 9-month, tenure-track position at the assistant profes-ce lowed. Willingeness to instruct londscape architecture sor level. Willingness to instruct landscape architec-ture and regional planning students in field sciences is a must. Opportunity exists for collaborative re-search in biogeochemistry; research interest in this area is desirable. Please submit curriculum vitae, a area is uesiradie. Please submit curriculum vitae, a summary of research interests, and names of three references by 25 March to: Dr. Arthur H. Johnson, Department of Landscape Architecture and Regional Planning-GSFA, University of Pennsylvania, Phila-delphia, Pennsylvania 19104.

FACULTY POSITION. Anticipated tenure-track for fall 1985. Rank and salary dependent on qualifica-tions. Ph.D. in analytical chemistry/biochemistry or analytical/physical Excellence in teaching is empha-sized. Evidence of such teaching must be submitted sized. Evidence of such teaching must be submitted and must also be included in the three required letters of reference. Search extended to 30 March 1985. Send complete curriculum vitae, including transcripts and letters of reference, to: Dr. R. Gior-dano, Chairperson, Department of Chemistry, West-ern Connecticut State University, Danbury, Conn. 06810. An Equal Opportunity/Affirmative Action Employee Employer.

POSITIONS OPEN

ENTOMOLOGIST-Applications are invited for the position of assistant curator in the Division of Insects of Field Museum of Natural History. The position is 12-month, full-time, career-track appointment, involving both research and curatorial responsibilities. Applicants must have a Ph.D. with primary interest in, and commitment to, systematic entomology in the broadest sense. Preference given to candidates with the ability to perform imaginative research, who can develop an active field program, and whose interests are suited to a research career amidst one of the world's leading systematic collections of insects. Other duties may include participation in exhibition and education functions of the Museum. exhibition and education functions of the Museum. Salary dependent on qualifications and experience. Send curriculum vitae, description of research expe-rience and plans, reprints of publications, and letters from three referees by 12 April 1985 to: Dr. Robert M. Timm, Chairman, Search Committee, Depart-ment of Zoology, Field Museum of Natural History, Roosevelt Road at Lake Shore Drive, Chicago, Illinois (2005) 2406, An Equal Opportunity Employer 60605-2496. An Equal Opportunity Employer.

THE UNIVERSITY OF CHICAGO DIVISION OF THE BIOLOGICAL SCIENCES

The Department of Pharmacological and Physiological Sciences is considering FACULTY APPOINT-MENTS from qualified candidates with research interests in the area of PHARMACOLOGY. From interests in the area of **PHARMACOLOGY**. From the time of its original charter, the principle of the University of Chicago has been to appoint scholars without regard to race, color, religion, sex, or national origin. Applicants should provide a brief statement of research interests and plans, curricu-lum vitae and bibliography, and the names of three individuals who are willing to write letters of recom-mendetion to: mendation to:

> Dr. Alfred Heller, Chairman Department of Pharmacological and Physiological Sciences The University of Chicago 947 East 58 Street Chicago, Illinois 60637

The University of Michigan Medical School, Depart-ment of Radiology, has on occasion open FACULTY POSITIONS within the department and its affiliated hospitals. Physicians filling these positions will take part in the programs of patient care, teaching, and research in the Department of Radiology. They will supervise the activities of house officers and aid in the teaching of house officers and medical students. Qualified applicants must be American Board of Radiology-certified or Board-eligible. Previous training or work experience in an academic institu-tion as well as demonstration of previous academic research and teaching experience are desirable. Aca-demic rank will depend on qualifications and experience. Interested applicants should contact: William Martel, M.D., Chairman, Department of Radiology, The University of Michigan Medical School, Ann Arbor, Michigan 48109. A nondiscriminatory, Affir-meting Actions Employer mative Action Employer.

FACULTY POSITION. Associate professor, Division of Biometry, Department of Community Health. Responsibilities will be to develop and administer a division of biometry, including design and implementation of undergraduate medical education programs, research, and consultation. An appropri-ate doctoral-level degree and evidence of productive research programs are required. Send curriculum vitae to: Chairman, Department of Community Health, Tufts University School of Medicine, 136 Harrison Avenue, Boston, Mass. 02111. An Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION UNIVERSITY OF LOUISVILLE CELLULAR BIOLOGIST

Tenure-track position to be filled for the 1985–1986 academic year at assistant professor level, Depart-ment of Biology, University of Louisville. Ph.D. required. Teaching responsibilities will include unrequired. Teaching responsibilities will include un-dergraduate courses in cellular biology and human anatomy and physiology in addition to development of undergraduate and graduate courses in the field of specialty, with contributions also to the general curriculum and research capabilities of the Biology Department. Applications must be received by 31 March 1985. Submit curriculum vitae, list of publica-tions, official transcripts, and names, addresses, and telephone numbers of six persons from whom letters telephone numbers of six persons from whom letters of reference may be obtained to: Dr. Roger G. Lambert, Chair, Cellular Biologist Search Commit-tee, Department of Biology, University of Louisville, Louisville, Ky. 40292. Equal Opportunity/Affirmative Action Employer.

IMMUNOLOGY R & D

SENIOR RESEARCH SCIENTISTS

IMREG, Inc., a publicly traded biotechnology company engaged in development of immunoregulators for human and veterinary application has openings for senior Ph.D. and/or M.D. scientists with accomplished track records in the following areas:

(1) Cellular Immunology-lymphokine research and/or flow cytometry.

(2) Molecular Biology---Recombinant DNA technology.

IMREG is developing unique technologies which demand creative solutions to clinically important R&D problems. We are looking for scientists who desire intellectually challenging positions at the advancing edge of the rapidly developing area of human lymphokines. The successful candidates will have accomplished research records which would qualify them for Associate or Full Professorial appointments in the academic world.

We offer competitive salaries appropriately scaled for training, experience and record productivity in research, and an attractive fringe benefit package including an incentive stock option plan. We are located in an attractive, fully-equipped setting in one of America's most interesting cities. The Company maintains linkages to the local and national academic immunologic community. Send curriculum vitae and names of three references in confidence to John L. Carlton, Vice-President of Administration and Finance, IMREG, Inc., Suite 1400, 144 Elk Place, New Orleans, Louisiana 70112.

THREE SENIOR POSITIONS

SOGETAL CORPORATION, a research and development arm of a major French corporation, is establishing an integrated, multidisciplinary research team to discover and develop plant growth regulators. We announce openings for the following positions: Synthetic Organic Chemist with post doctoral experience to synthesize compounds for biological testing. This candidate should have a strong interest in plant sciences and in developing structure-activity relationships, as well as excellent background in organic synthesis.

Plant Biochemist with postdoctoral experience having an extensive background in the enzymology of metabolic and catabolic pathways to study the mode of action of plant growth regulators. This candidate should have an interest in agricultural biotechnology and enjoy working in a team environment

Plant Physiologist or Plant Biochemist with experience in bioevaluation of agricultural chemicals. Research will involve both field and greenhouse testing of plant growth regulators as well as computerized data management. The ideal candidate will have either a PhD or M.S. with additional training. Send curriculum vitae to:

Dr. Jeffrey Labovitz Director, Laboratory Research SOGETAL CORP. 3872 Bay Center Place Hayward, CA 94545

ENVIRONMENTAL RESEARCH SCIENTIST

Los Alamos National Laboratory

The Environmental Sciences group of the Laboratory is seeking a professional staff member to become part of a large multidisciplinary team performing research in environmental sciences and waste management with a focus on environmental problems associated with energy technology. A current research project involves identification of solutions to potential problems associated with energy and defense systems waste with emphasis on identifying mechanisms that control contaminant mobilization, transport and impact of the environment

Scope of Work

specific job responsibilities include: assuming the lead in research tasks on groundwater contaminant modeling with emphasis on unsaturated flow and solute transport, i.e., saturated and un-saturated solute transport using field caisson facilities and computer simulation and collaborative research efforts with related projects on surface hydrology and erosion; designing and performing experiments; analyzing data; applying predictive models and publishing results in appropriate media.

Experience

• Experience Qualifications for this position include: demonstrated professional expertise in managing environ-mental research programs and leading multidisciplinary scientific personnel; extensive experience in application of advanced numerical techniques, including finite difference and finite element methods to solution of groundwater contaminant transport problems; familiarity with biological and geochemical components of contaminant migration in surface and sub-surface regimes; demonstrated effective written, oral and inter-personal communication skills, a Ph.D. in engineer-ing science, mathematical background to model multidimensional nonsteady state flow or equiva-lent combination of education and relevant experience. Computer programming and large scale computation models experience is desirable.

About Los Alamos

The Laboratory, a national resource for multifaceted scientific research, is operated by the University of California for the U.S. Department of Energy. Our beautiful location in the mountains of northern New Mexico offers a relaxed community lifestyle with exceptional outdoor recreational activities. To apply in confidence, please submit your resume to:

Sandra Harding, DIV 85-BL Personnel Administration Division Los Alamos National Laboratory Los Alamos, New Mexico

87545



An Affirmative Action/Equal Opportunity Employer

Biochemical/Molecular Parasitologists

The newly created Biochemical Parasitology group of the Merck Sharp & Dohme Research Laboratories, Division of MERCK & CO., Inc., has several open positions for experienced biochemists and molecular biologists with strong interests in parasitological research.

The incumbents are expected to establish quality basic research programs aimed at identifying novel approaches to the control of parasitic infection, particularly related to veterinary medicine. The candidates should have interests in participating in the following research areas: mechanisms of neurotransmission in helminths and arthropods; characterization of cell-surface molecules affecting host-parasite interactions; and iden-tification of unique biochemical targets for chemotherapeutic attack.

The successful candidates must have at least two years of post doctoral research experience in biochemistry and molecular biology, a strong interest in applying their skills to problems of parasitic infection, and a desire to participate in an interdisciplinary approach to drug discovery.

Salary, benefits and growth potential are excellent. Those in-terested in becoming candidates to join a highly success-oriented group, please send resume to **Mr. Lou Ballester**, MERCK & CO., Inc., P.O. Box 2000, Rahway, New Jersey, 07065. An Equal Employment Opportunity Employer.

FACULTY POSITION IN VIROLOGY

The Children's Hospital in Boston, Division of In-The Children's Hospital in Boston, Division of In-fectious Diseases, is seeking a molecularly oriented virologist with a strong background in biochemistry. The individual should be capable of mounting an independent research program, with emphasis on viruses that cause childhood diseases, and be able to effectively teach pre- and postdoctoral fellows. The academic position offered is assistant professor of microbiology and molecular genetics at Children's Hospital, offered through the Department of Micro-biology and Molecular Genetics at Harvard Medical School. Apply by 1 July 1985 with a detailed résumé and three letters of evaluation to: Dr. A. S. Huang, Division of Infectious Diseases, Children's Hospital, Division of Infectious Diseases, Children's Hospital, 300 Longwood Avenue, Boston, Mass. 02115.

TWO FACULTY POSITIONS IN PLANT PHYSIOLOGY AND ENVIRONMENTAL BIOLOGY

Two tenure-track assistant professorships beginning 3 September 1985. Preference to applicants with teaching experience, knowledge of computers and interaction products attidants unarguing. IN ANT teaching experience, knowledge of computers and interest in graduate student supervision. PLANT PHVSIOLOGIST—Teach courses in plant physiolo-gy, general botany, cell metabolism and biological instrumentation. Ph.D. in plant physiology and experience in tissue culture techniques required. ENVIRONMENTAL BIOLOGIST—Teach courses in environmental biology, environmental studies, environmental health and general biology. Doctorate in an area of environmental biology required; prefer-ence to those with background in environmental health and knowledge of current environmental is sues. Send curriculum vitae. transcrints and three to sues. Send curriculum vitae, transcripts and three to five letters of reference to: W. L. Ezell, Department of Biological Sciences, St. Cloud State University, St. Cloud, Minnesota 56301. Deadline: 1 April 1985, or until position is filled. An Equal Opportunity/Affir-mative Action Employer.

Head, Division of Science Search committee seeks a division head for the ivision of Science at Northeast Missouri State Uni-Division Division of Science at Northeast Missouri State Uni-versity, Kirksville. Northeast recently gained na-tional recognition in being the co-recipient of the G. Theodore Mitau Award for Innovation and Change in Higher Education. Recognition has also come at the state level in the recommendation by the Commission of Higher Education that Northeast become the premier liberal arts and science univer-sity in Missouri.

become the premier liberal arts and science univer-sity in Missouri. The Science Division is one of 13 academic divi-sions and serves approximately 600 majors with 35 full-time faculty members representing the follow-ing disciplines: biology, chemistry, physics and sci-ence education. An MS program is offered in biology plus an MA program is offered in science education. An with emphasis in a variety of science options. Applicants must have an earned doctorate in a sci-ence field with an outstanding academic record and demonstrated scholarship. Candidates with docu-mented skills in leadership, administration, curricu-lum development, research and grantsmanship are desired. Salary is negotiable based on qualifications and experience.

desired. Salary is negotiable based on qualifications and experience. Please forward letter of application, curriculum vitae, academic transcripts (undergraduate and grad-uate) and three letters of reference to: Dr. Gary Sells, Search Committee, Division of Science, Number of the second second second second second second Number of the second second second second second second Number of the second second

Northeast Missouri State University, Kirksville. MO 63501.

Application deadline is March 15, 1985, or until osition is filled.

NMSU 🖣

NMSU is an equal opportunity employer.

POSTDOCTORAL—CELLULAR SECRETION Available immediately to study secretory mecha-nisms in the adrenal chromaffin system. Experience nisms in the adrenal chromatin system. Experience in any of the following areas desirable: cell calcium regulation, P. Inositol metabolism, cell culture, membrane biophysics. Send curriculum vitae, bibli-ography, and the names of three references to: Dr. Allan Schneider, Sloan-Kettering Institute, Cornell University Graduate School of Medical Sciences, 1275 Vork Avenue New York, New York 10021 York Avenue, New York, New York 10021.

POSTDOCTORAL POSITION available immediate-ly for an organic chemist, biochemist, or cell biolo-gist to develop fluorogenic substrates for proteinases and to study their biomedical applications. Send résumé and three letters of recommendation to: Professor Cheng-Wen Wu, Department of Pharmaco-logical Sciences, State University of New York (SUNY) Stony Brook, Stony Brook, N.Y. 11794. SUNY, Stony Brook, is an Affirmative Action/Equal Opportunity Educator and Employer. AK Number 18-85. **POSTDOCTORAL POSITION** available immediate-

POSITIONS OPEN

FACULTY POSITIONS IN PHARMACODYNAMICS

The newly created Department of Pharmacodynam-Florida invites applications for two tenure-track faculty positions at the assistant and/or associate professor level. A Ph.D. in physiology/pharmacolo-gy/toxicology and a record of productive postdoctoral research are required. A candidate at the associate professor level should be an established, independent researcher. Successful candidates will be ex-pected to develop a vigorous, supported research program and to contribute to the teaching program in the department, at both the graduate and undergradthe department, at both the graduate and undergrad-uate level. Effective start date: 1 September 1985 or as soon as possible thereafter. All applicants should submit current curriculum vitae, three letters of recommendation, and a brief description of future research plans by 31 March 1985 to: Dr. Michael J. Katovich, Chairman of Search Committee, Depart-ment of Pharmacodynamics, Box J-4, J. Hillis Miller Health Center, College of Pharmacy, University of Florida, Gainesville, Florida 32610. For further infor-mation, telephone: 904-392-3408. The University of Florida is an Equal Opportunity/Affirmative Action Employer. Employer.

FACULTY POSITION

Person with Ph.D. in pharmacology sought for full-time faculty position in Clinical Medical School Department of Obstetrics and Gynecology. Prefer some clinical exposure or experience. Interest should be in area of reproductive biology. Salary and

rank negotiable. Contact: Robert Messer, M.D. RAHSC Amarillo 1400 Wallace Avenue Amarillo, Texas 79106 Telephone: 806-358-3101

MARINE BIOLOGY—ENVIRONMENTAL SCIEN-TIST. Full-time, permanent tenure-track. Duties in-clude teaching a lecture-laboratory course in marine clude teaching a lecture-laboratory course in marine biology, a non-laboratory course in environmental science, a course in molecular/cellular biology. Qualifications: Ph.D.; start date: September 1985. Applications must include transcripts, résumé, and three letters of recommendation. All application materials must be received by 19 March 1985 and should be sent to: Dr. P. F. Cotter, Biology Depart-ment, Framingham State College, Box 2000, Fra-mingham, Mass. 01701. Equal Opportunity/Affirma-tive Action Employer.

MOLECULAR BIOLOGIST

The Oklahoma Medical Research Foundation is a growing research institute located on the campus of the University of Oklahoma Health Sciences Center. The research programs of the Foundation include both basic and clinical biomedical sciences in cardiovascular and cancer research. The Foundation has a postgraduate program in various fields through the affiliation with the Graduate College of the University of Oklahoma.

Applications are invited for a staff position open presently in the Protein Research Program, Oklaho-ma Medical Research Foundation. The position is not limited on academic ranking. Preference will be given to candidates with an established record of research excellence and productivity. We are particularly interested in scientists who are conducting research in the area of modern molecular biology. research in the area of modern molecular biology, including recombinant DNA technology, related to the proteins. Applications will be accepted until suitable candidates are identified. Please submit curriculum vitae, a brief description of current and future research, and the names of three individuals who would be willing to provide letters of reference to: Dr. Jordan Tang, Head, Protein Research Pro-gram, Oklahoma Medical Research Foundation, 825 Northeast 13 Street, Oklahoma City, Okla. 73104. Oklahoma Medical Research Foundation is an Eaual Oportunity/Affirmative Action Employer. Equal Opportunity/Affirmative Action Employer.

NMR SPECTROSCOPY

Postdoctoral positions are available to study Postdoctoral positions are available to study structure, internal dynamics, and function in pro-teins and nucleic acids, especially by 2D NMR. 500 MHz spectrometer. Molecules being studied include cytochrome c, hemoglobin, growth factor protein, apamin, covalent DNA junctions [see *Biophys. J.* **47**, 14a/Dl and 208a/D3 (1985)]. Please send curricu-lum vitae plus cover letter and have two reference letters forwarded to: S. W. Englander or N. R. Kallenbach, Department of Biophysics and Biochem-istry, University of Pennsylvania, Philadelphia, Pa. **19104**.

POSITIONS OPEN

FACULTY POSITION—MARINE FOOD CHEMIST/BIOCHEMIST

The Institute of Marine Resources and the Department of Food Science and Technology, University of California, Davis, invite applications for a tenure-track, 11-month position (75 percent research/25 percent teaching) at the assistant, associate, or full professor level. Applicants must have a Ph.D. in chemistry, biochemistry, food science, or a related field and either postdoctoral experience or posteradfield and either postdoctoral experience or postgrad-uate research experience in lipid and/or protein chemistry/biochemistry. The appointee will conduct fundamental chemical/biochemical research relevant to marine animals as food, participate in teaching marine food science and other food chemistry/bio-chemistry courses, advise students and collaborate with marine scientists on other University of Califor-nia campuses and with the marine food industry. Submit résumé including a summary of research interests and of research and teaching experience, transcripts of undergraduate and graduate work (if applicant is within 5 years of receiving doctorate), publication list, and names and addresses of four references to: **Dr. David Ogrydziak, Search Commit**tee Chairman, Institute of Marine Resources, Univer-sity of California, Davis, Calif. 95616. Closing date: 1 April 1985. The University of California is an Affir-mative Action/Equal Opportunity Employer.

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 tech-niques, to join active research group based in mediincluss, to join active research group based in hield cine/pharmacology with current interests centering on the cellular electrophysiology and pharmacology of human cardiac tissues and of animal models of ischemia/disease/dysrhythmia, including investiga-tions of: (i) mechanisms of low resting potential; (ii) electrogenic sodium pumping in specimens of human atrium and ventricle; (iii) actions of selected car-dioactive 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.

PHYSIOLOGIST/PHARMACOLOGIST

Applications invited for tenure-track position at assistant professor level; 11-month appointment. Good background in general physiology and pharmacology required for teaching in the professional program. Significant teaching experience desirable and demonstrated ability to conduct independent research required. Send curriculum vitae and names of three references by 15 May 1985 to: Search Committee, Physiology and Pharmacology Department, School of Pharmacy, University of the Pacific, Stockton, Calif. 95211. An Equal Opportunity/Affirmative Action Franlover Employer

PLANT MOLECULAR BIOLOGIST/BIOTECH-NOLOGIST. The Department of Plant Pathology and Crop Physiology, Louisiana State University, is searching for a faculty member at the assistant oprofessor level to conduct research aimed at devel-oping cellular and molecular approaches for plant improvement with emphasis on plant-pathogen in-teractions. 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 follow interests of the successful candidate, and basic as well as applied investigations will be en-couraged. Teaching a graduate level course and advising graduate students will be encouraged. Ap-plicants must have a Ph.D. with emphasis in plant plicants 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, tran-scripts, 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 Build-ing, Baton Rouge, Louisiana 70803; telephone: 504-388-1464. Louisiana State University is an Equal Opnortunity/Affrmative Action Employer. Opportunity/Affirmative Action Employer.

POSTDOCTORAL **APPOINTMENTS**

Scope of Work

Positions are available for research on phytotoxin tabtoxinne-B-lactam. Areas include the biosynthetic route, mechanisms of self-protection, mechanism of action within the plant and the chemical mechanism of action on the target: glutamine synthetase.

Experience

Areas of experience may include enzymology, plant physiology, bacteriology and organic chemistry.

Appointment for one year with possible renewal. Salary \$27,900 to \$29,376. U.S. citizenship required. Contact Pat J. Unkefer at (505) 667-1001. Send resume and three letters of reference to:

Sandra Harding **Personnel Administration** Division DIV 85-BH Los Alamos National Laboratory Los Alamos, NM 87545

TOS AVANO

An Affirmative Action/ Equal Opportunity Employer



MOLECULAR BIOLOGIST

Lifecodes Corporation, a rapidly growing biotechnology company, is seeking a post-doctoral fellow to join a multi-disciplinary team applying recombinant DNA technology to medical diagnostics. Qualified applicants will have a recent Ph.D. in one of the biological sciences and should have experience with library construction as well as the isolation and sequencing of specific genes.

Lifecodes Corporation is located in Westchester, New York, only 30 minutes from midtown Manhattan.

To apply, send your curriculum vitae along with the names and telephone numbers of three references to:

> Dr. Jeffrey Glassberg **Personnel Department Lifecodes Corporation 4 Westchester Plaza** Elmsford, New York 10523

1 MARCH 1985

ASSISTANT PROFESSORS

The Program in Ecology, Behavior and Evolution, Department of Zoological and Biomedical Sciences, Ohio University, in-vites applications for two positions available September 1985

1) **POPULATION GENETICS**—Assistant professor, tenure-track. Ph.D. is required; professor, tenure-track. Ph.D. is required; postdoctoral experience desirable. Teach general genetics, population genetics, and course of choice. Develop research in popu-lation genetics, preferably field oriented and working with naturally occurring animal populations. Establish a laboratory for anal-ysis of molecular variation, excellent oppor-tunities exist to interact with research pro-trane in sustancing acadibilatory ecology.

grams in systematics, sociobiology, ecology, molecular genetics, and laboratories in mo-lecular genetics and recombinant DNA. 2) AVIAN ECOLOGY/SYSTEMATICS— Assistant professor, tenure-track. Ph.D. is required; postdoctoral experience desirable. Teach general ecology, ornithology, and co-ordinate laboratories in general zoology. Develop research in the ecology and systemat-ics of birds, expertise with molecular tech-niques in ecology and systematics preferred. There are opportunities to interact with re-cords the ecology in sustance and expertises and expertises. search programs in systematics, ecology, sociobiology, evolution, and laboratories in molecular genetics and recombinant DNA.

Send a résumé, a statement of research interests, summary or abstract of disserta-tion, and three letters of recommendation to: Dr. Gerald E. Svendsen

Dr. Gerald E. Svendsen Search Committee, Department of Zoological and Biomedical Sciences 107 Irvine Hall Ohio University Athens, Ohio 45701 Telephone: 614-594-6943 Persons who applied for these positions last year and want to activate their files should send a letter to that affect and update the files where necessary

the files where necessary

Ohio University is an Affirmative Action/ Equal Opportunity Employer.

PROFESSOR AND HEAD DEPARTMENT OF PHYSIOLOGY MEDICAL SCHOOL UNIVERSITY OF MINNESOTA

The University of Minnesota Medical School invites applications for the position of professor and head of the Department of Physiology. The head of the Department of Physiology will be the academic, scientific, and administrative leader of this major de-partment which also serves as the University center for this important field. The depart-ment head has the responsibility of imple-menting medical, allied health, and graduate education in physiology and guiding the de-velopment of a strong departmental research program. A distinguished scientist is sought to expand the department's commitment to contemporary investigative approaches for defining cellular function and its regulation in molecular and physical terms. and administrative leader of this major de-

We seek a candidate with outstanding we seek a candidate with outstanding academic credentials with a Ph.D. or M.D. or both degrees, with at least 8 years of academic/research experience beyond the doctoral degree. The individual who will assume this new leadership must have inter-national research stature and a currently active research program. Salary is competi-tive and negotiable. Starting date is 1 July 1985 or a scon as possible 1985 or as soon as possible.

Interested candidates who meet the qualifications described are requested to send current curriculum vitae documenting their qualifications and professional accomplishments. The deadline for receiving applica-tions is 15 May 1985. Please send to:

Dr. Nelson D. Goldberg Chairman, Search Committee 3-260 Millard Hall 435 Delaware Street, SE University of Minnesota Minneapolis, Minn. 55455

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

Principal Scientist

Ortho Pharmaceutical, a Johnson & Johnson Company, has earned a distinguished reputation for the quality and dependability of its products worldwide. Our commitment to research and development result in an on-going need for bright, innovative Scientists

In our Drug Metabolism Division, we currently have a need for a Principal Scientist with a Ph.D. in Analytical Chemistry, Biochemistry or equivalent experience, plus 6 or more years' experience in the development and application of radioimmunoassay techniques for use in pharmacokinetic studies, as well as extensive experience in computerized RIA data reduction. In addition, experience in the design and interpretation of pharmacokinetic and bioavailability studies is desirable.

In this position, you will be responsible for preparing, developing and implementing immunoassays for drug candidates in biological matrices; for supervising 2-3 professional/technical people in method development and routine sample analysis; for assisting in the design and execution of clinical and non-clinical studies, and for conducting work according to GLP regulations

We offer a highly competitive salary, comprehensive benefits and the vast resources of belonging to the Johnson & Johnson Family of Companies. For immediate consideration, please forward a detailed resume or c.v. to: Ms. Robin Engard Seiz, Dept. 7,

ORTHO PHARMACEUTICAL CORPORATION Route 202, Raritan, New Jersey 08869 An Equal Opportunity Employer m/f.



HEAD—APPLIED GENETICS LABORATORY

The Public Health Research Institute (PHRI) is seeking a scientist expert in molecular genetic technology to head a growing laboratory involved in developing expression vector systems for commer-cial application. Primary responsibilities would include close scientific and intellectual interaction with PHRI staff members and detailed supervision of the laboratory program on a daily basis. Director would also be expected to interact with investors. to be responsible for decisions concerning laboratory personnel, and to be involved in deliberations conpersonnel, and to be involved in deliberations con-cerning choices of new projects. State-of-the-art knowledge of molecular genetic technology, and molecular microbiology and biochemistry essential. Salary competitive with biotechnology industry. Send résumé and three references to: Personnel Department, PHRI, 455 First Avenue, New York, N.Y. 10016.

Equal Opportunity/Affirmative Action Employer

PLANT PHYSIOLOGIST OR BIOCHEMIST. U.S. Department of Agriculture, Agricultural Research Service, Cereal Crops Research Laboratory, and Department of Agronomy, University of Wisconsin, Madison. Research on metabolic regulation of synthesis of major and minor constituents of cereal grains with emphasis on carbohydrates. Ph.D. in plant physiology, biochemistry, or related field. Postdoctoral experience desired. Knowledge of plant biochemistry and enzymology and skill in separation and purification of biological molecules required. GS-11/12/13; salary range \$26,381 to \$37,599 based on qualifications. Candidates must be U.S. citizens. Contact: Dr. David Paterson take D.S. citizens. Contact: Dr. David Peterson, tele-phone 608-262-9620 for assignment details and Jean Dunn at 301-344-1700 for application procedures. Applications must be submitted by 12 April 1985. Equal Opportunity Employer.

PLANT POPULATION BIOLOGIST/GENETICIST. The Department of Botany, Ohio University, has a tenure-track faculty position, assistant professor level. Applicants must have a research program that combines the ecological and genetic components of population biology. Preference will be given to can-didates with strong quantitative skills experienced in the delay of preference will be here a Db D is using methodology of molecular biology. A Ph.D. is required for this position; postdoctoral experience is desirable. The successful applicant will direct students, conduct an active research program, and seek external research funding. The candidate chosen will teach plant genetics, a course in his/her specialty, and an introductory botany course. Candidates should submit curriculum vitae, research plan, re-prints, and names and addresses of four references by 25 March 1985 to: Dr. Irwin A. Ungar, Depart-ment of Botany, Ohio University, Athens, Ohio 45701. Ohio University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS (TWO) available immediately for recent Ph.D.'s to join active re-search group based in medicine/pharmacology in studies on the cellular electrophysiology and phar-macology of human cardiac tissues and of animal models of ischemia/disease/dysrhythmia. Current in-terests include investigations of: (i) basic mechaterests include investigations of: (i) basic mecha-nisms underlying low resting potential in specimens of human atrium and ventricle; (ii) electrogenic sodium pumping; (iii) electrophysiologic actions of selected cardioactive drugs and ions, particularly antiarrhythmic and cardiotonic agents; and (iv) uses of monophasic action potential recordings to moni-tor in vivo drug activity and dysrhythmia. Experi-ence with conventional celluar cardiac electrophysi-logical traching required to be additive mirroological techniques required. Ion-selective micro-electrode, multicellular voltage-clamp and/or patch clamp experience also desirable. Please send state-ment 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.

POSTDOCTORAL ASSOCIATE POSITION MASSACHUSETTS INSTITUTE OF TECHNOLOGY

A postdoctoral associate position is available immediately at the Massachusetts Institute of Technol-ogy (MIT) in the Harvard-MIT Division of Health ogy (MIT) in the Harvard-MIT Division of Health Sciences and Technology. The project involves in-creasing the translational efficiency of plant messen-ger RNA's. Familiarity with experimental methods used in current molecular biology and recombinant DNA/RNA technology is required. A Ph.D. is re-quired for this position. Contact: Dr. Lee Gehrke, MIT E25-545, Cambridge, Mass. 02139. Telephone: 6172;53:7608 617-253-7608.

POSITIONS OPEN

NEUROBIOL OGIST

POSTDOCTORAL RESEARCH ASSOCIATE position available April 1985 for a recent Ph.D. in the neurosciences. He or she will join in the design and performance of experiments to analyze functional and structural properties of synaptic contacts in developing and regenerating autonomic ganglia. Opportunity to learn and perform experiments involv-ing patch-clamp and microelectrode intracellular recording, light and electron microscopy, and fluctuation analysis of synaptic channel properties. Send curriculum vitae and names of three references to: Dr. Lawrence M. Marshall, Department of Physiolo-gy 206H, University of North Carolina, Chapel Hill, N.C. 27514. An Affirmative Action/Equal Opportunity Employer.

NEUROSCIENTIST with Ph.D. and experience in single unit recording and/or microiontophoresis re-quired to collaborate in ongoing electrophysiological and neurochemical studies of respiration-related brainstem neurones. Position is available immediately. Send curriculum vitae and names of three refer-ences to: Dr. J. L. Henry, Department of Physiology, McGill University, 3655 Drummond Street, Montreal, Quebec, Canada H3G 1Y6, by 30 March 1985.

POSTDOCTORAL ASSOCIATE: Carbohydrate en zymologist to examine action of carbohydrases on specific polysaccharide structures. Knowledge and experience on carbohydrases beneficial but most important is a background in quantitative methodology. Send curriculum vitae and references to: Dr. R. L. Whister, Department of Food Science, Purdue University, West Lafayette, Indiana 47907. Purdue University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOW interested in studying the role of prostaglandins and other eiocosanoids in (i) the control of proliferative activity of rat colonic epithelium or (ii) the mediation of functional changes in glomeruli of experimental diabetes mellitus, \$20,000. Requirements: Ph.D. in biochemistry of pharmacology. Experience with rats, lipids, and HPLC preferred. Submit curriculum vitae and names of three references to: **Dr. F. R. Derubertis**, VA Medical Center, University Drive C, Pittsburgh, Pennsylvania 15240.

POSTDOCTORAL FELLOW. Biophysicist with a doctorate degree or an equivalent qualification. Broad range of experience in biophysical investigation and theoretical knowledge in physical principles of spectroscopy, electron microscopy, and so forth, is essential. Tissue culture experience and knowledge of exterior end eteraction in the sector. edge of statistical analysis and stereology is pre-ferred. The investigator will be involved in developing a new quantitative analysis of fibers in water. Send résumé to: Personnel Office T-47, University of Medicine and Dentistry of New Jersey (UMDNJ)– Rutgers Medical School, P.O. Box 101, Piscataway, N.J. 08854. An Equal Opportunity/Affirmative Ac-tion Employer, M/F.

UMDNI

POSTDOCTORAL POSITION for recent Ph.D. in terested in the biochemical pharmacology of antitu-mor agents. Areas of study include (i) mechanisms of nucleoside transport in normal and neoplastic cells [see *Mol. Pharmacol.* 24, 279 (1983)], (ii) modulation of antitumor drug activity by nucleoside transport inhibitors in vitro (cell culture) and in vivo, and (iii) effects of drug combinations on hematopoietic stem cells. Send curriculum vitae, summary of research experience, and names of three references to: Dr. Judith A. Belt, Division of Biochemical and Clinical Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, P.O Box 318, Mem-phis, Tenn. 38101. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION open for studies on opioid peptide metabolism. Research will focus on the inactivation and interconversion of opioid pep tides using enzymology and molecular cloning tech-niques. Stipend commensurate with experience. Send curriculum vitae and names of references to: Dr. L. Hersh, Department of Biochemistry, University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, Texas 75235. An Equal Opportunity University.

POSTDOCTORAL POSITION available to study the neuroendocrine mechanisms governing testicular function and the timing of puberty in the rhesus monkey. Apply with curriculum vitae to: Dr. Tony M. Plant, University of Pittsburgh, Department of Physiology, 616 Scaife Hall, Pittsburgh, Pa. 15261.

POSITIONS OPEN

POSTDOCTORAL POSITION IN SYSTEMATICS

Appropriate fields: aquatic biology, botany, ento-mology, herpetology, ichthyology, invertebrate zo-ology and paleontology, mammalogy, ornithology; also anthropology. Must have received Ph.D. within last 5 years. Pays \$19,000, plus \$1,000 expenses; begins as early as 1 September; normally a 1-year appointment. Provide résumé, research plan, and three references by 15 May to: Tilton Fellowship Committee, California Academy of Sciences, Golden Gate Park, San Francisco, Calif. 94118.

POSTDOCTORAL POSITION CARDIAC/SMOOTH MUSCLE ELECTROPHYSIOLOGY

Unique industrial and academic postdoctoral position to study ionic channel properties of isolated cardiac and smooth muscle cells and modulation by pharmacological and biochemical agents. Project will involve use of single cardiac and vascular smooth muscle cells for voltage clamp and internal perfusion as well as patch clamp techniques. Candi-dates should have a strong background in electrophysiology. For the first year, the successful candi-date will work with: Dr. J. R. Hume, Department of Pharmacology and Toxicology, Michigan State University, East Lansing, Mich. 48824; the second year will be spent with: Dr. Kai S. Lee at the Upjohn Company in Kalamazoo, Mich. 49001. Salary commensurate with experience and qualifications. Send utriculum vitae and three letters of reference to: **Dr. Hume** (above address). Deadline for receipt of applications is 22 March 1985.

POSTDOCTORAL POSITION available immediately to study the effects of local anesthetics and hydrophobic molecules on conformation and function of cytochrome c, myoglobin, and cytochrome oxidase. Light of EPR spectroscopy experience with these proteins desirable. Salary \$18,000 for up to 21/2 years. Send résumé and names of three references 420to: Dr. H. James Harmon, Zoology Department, 430 LSW, Oklahoma State University (OSU), Stillwater, Okla. 74078. OSU is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available for studies of photo and catabolite induction of fumarase in *Euglena*. Studies involve using immunological and recombinant DNA techniques to follow the synthesis of mRNA and protein during enzyme induction by light and ethanol in order to determine whether enzyme levels are controlled at the transcriptional or with or desire to learn immunological and recombinant DNA techniques should submit curriculum vitae and three letters of recommendation by 15 March to: Dr. Steven Schwartzbach, 303 Lyman Hall, University of Nebraska–Lincoln, Lincoln, Nebraska 68588-0118. Affirmative Action/Equal Opportunity Emplover.

POSTDOCTORAL POSITIONS

Two postdoctoral (research associate) positions are available 1 June 1985 for individuals with experience in molecular cloning, RNA isolation and DNA methodologies (hybridization, sequencing or gene trans-fection into cultured eukaryotic cells) and protein purification to investigate hormonal regulation of purification to investigate hormonal regulation of gene expression in normal and neoplastic cells. Salary commensurate with experience. Applicants should send curriculum vitae and names of three references to: Dr. Craig W. Beattie, Division of Surgical Oncology, University of Illinois, 840 South Wood Street, Chicago, Ill. 60612. The University of Illinois is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS IN CANCER RE-SEARCH, UNIVERSITY OF CALIFORNIA, SAN DIEGO (UCSD). UCSD Cancer Center's training grant has six positions available within the next 6 months; 22 faculty representing basic and applied cancer research provide a considerable choice of laboratories and mentors. Ph.D.'s or M.D.'s who are U.S. citizens or permanent residents are eligible to apply. Please send complete curriculum vitae to: Carol MacLeod, Ph.D., UCSD Cancer Center, T-011, La Jolla, Calif. 92093; telephone: 619-294-3903.

POSTDOCTORAL RESEARCH ASSOCIATE-MI-CROBIAL GENETICIST. Study the genetics of pseudomonads. Research experience and Ph.D. de-gree in microbial genetics with strong biochemistry background desired. Position available 1 May 1985. Send curriculum vitae and list of references to: L. F. Elliott, 215 Johnson Hall, Washington State University, Pullman, Wash. 99164-6421, by 1 April 1985.

Postdoctoral cientists **Iolecular Genetics**

Smith Kline & French Laboratories, a leader in pharmaceutical research, is seeking postdoctoral scientists to expand its current research programs employing recombinant DNA technology and other genetic approaches to develop novel therapeutic agents.

Excellent opportunities exist for innovative, inter-disciplinary research in our new, superbly equipped Molecular Biology Center at Upper Merion in suburban Philadelphia. We encourage our staff to pursue advanced research, to publish and interact fully with the scientific community.

The Department of Molecular Genetics, under the direction of Dr. Martin Rosenberg, is recruiting for outstanding postdoctoral scientists with experience in any of the following areas: gene cloning, regulation and expression in both Gram+ and Grambacteria, DNA sequencing, mammalian gene isolation and characterization.

Our compensation and benefits package including our relocation policy are geared to today's economy and are among the best in industry. For confidential review, send your C.V. and names of three references to Mr. Walter B. Flagg, Senior Employment Consultant, SMITH KLINE & FRENCH LABORATORIES, Division of SMITHKLINE BECKMAN CORPORATION, 1558 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.



CUSTOM PEPTIDES CYS C PR0 from the PEPTIDE SYNTHESIS FACILITY Part of the Academic and ഹ > **Research Activity of** ൭ ц The Division of Infectious Diseases, ° ₹ Children's Hospital, a Harvard Medical School Affiliated Institution. SIT I B œ ¥ • Synthesis Z σ 8... Hydrogen Fluoride Cleavage O GLU Radioactive Labeling ш 8... Amino Acid Analysis Milligram to Gram Amounts Computer Profiles NS/ z 8. SP ۵ 8. • Personalized Consultation ₩ ⊢ Ë S For more Information Contact: Dr. J. D. Young PEPTIDE SYNTHESIS FACILITY 1 -LEU CHILDREN'S HOSPITAL -300 LONGWOOD AVENUE ۷AL > BOSTON, MA 02115 • (617) 7357621 GĽ G

Amino Acid Symbols: Copyright AAAS

Circle No. 299 on Readers' Service Card



Stuart Pharmaceuticals, a Division of ICI Americas Inc. and one of the nation's fastest growing pharmaceutical companies, has positions available for skilled Pharmacologists in the following areas:

OSTEOARTHRITIC RESEARCH Senior Research Pharmacologist

Position requires Ph.D. in Pharmacology with experience evaluating potential anti-osteoarthritic drugs in vivo. Expertise with proteoglycan biochemistry, enzyme purification and protease assay systems would prove useful.

RENAL

Ż

BS/MS Positions

- Assist in evaluating renal compounds. Candidate should demonstrate good animal techniques. Experience with biochemical or isolated perfused kidney technique highly desirable
- Micropuncture laboratory position. Will assist in the evaluation of drug effects on renal function and work with microanalytical techniques for evaluating renal solute transport and hemodynamics. 2 years in a lab setting and experience in large and small animal surgery are required.

Modern laboratories in suburban campus setting 25 miles south of Philadelphia. Competitive salaries/benefits, including tax-sheltered investment program. Send c.v. and salary requirements to: Nancy E. Gilpin, Employee Relations, Stuart Pharmaceuticals, Wilmington, DE 19897. Equal Opportunity Employer m/f.



CELLULAR IMMUNOLOGIST/ IMMUNOBIOLOGIST

The Upjohn Company, a leader in the worldwide research, production, and marketing of pharmaceuticals, chemicals, and agricultural products, has an opening in its Hypersensitivity Diseases Research Unit for a Research Scientist interested in the discovery and development of agents useful in arthritis therapy. In addition to establishing an independent research program in this area, this scientist will also serve as a member of multidisciplinary research project team consisting of experienced scientists with similar research programs leading to the development of disease modifying agents of arthritis using in vivo models of autoimmunity.

Candidates should have a Ph.D. in Immunobiology/ Immunopharmacology. Special interests in the pathogenesis of autoimmune diseases with an emphasis on T-lymphocyte immunoregulatory and immunomodulation mechanisms and experience with **in vivo** models of autoimmunity are highly desirable. Candidates must have a demonstrated ability to conduct independent research independent research.

Upjohn offers a stimulating research environment, career potential, competitive salary (commensurate with experience), and an outstanding benefits package. The Kalamazoo area provides a comfortable living environment and immediate access to an excellent mix of cultural, educational, and recreational pursuits.

For confidential consideration, please call toll-free Upjohn's Corporate Employment Office at 1-800-253-8600 and ask for extension 3-6767. In Michigan, call collect 616-323-6767. Please refer to ad number 15962 when calling.



An Equal Opportunity Employer M/F/H/V

century of caring

POSTDOCTORAL POSITION-Lysosome biogene sis. Available immediately (3 years duration). Solid biochemical training and intense interest in research area essential. Contact: **Dr. Arnold Kaplan, Depart**ment of Microbiology, St. Louis University School of Medicine, 1402 South Grand Boulevard, St. Louis, Mo. 63104. St. Louis University is an Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately in biochemistry and molecular biology of mammalian and protochordate cytolytic factors and histo-compatibility proteins. Experience in molecular ge-netics preferred. Studies will involve isolation and characterization of (i) cytolytic factors produced by mouse and human T and natural killer cells, (ii) cytolytic factors and histocompatibility antigens in protochordate graft rejection, and (iii) the control-ling genes in these systems. Send curriculum vitae and the names of three references to:

Dr. Stephan Targan Associate Professor Department of Medicine University of California, Los Angeles School of Medicine Los Angeles, Calif. 90024 or

Dr. Virginia Scofield Assistant Professor Department of Microbiology and Immunology University of California, Los Angeles School of Medicine Los Angeles, Calif. 90024

POSTDOCTORAL POSITION IN BIOCHEMICAL TOXICOLOGY. NIH supported research investi-gating mechanisms of hepatotoxicity. Background in one or more of the following is desirable: hepatocyte one or more of the following is desirable: hepatocyte culture, subcellular fractionation, membrane purifi-cation, histopathology, lipid peroxidation and/or protein turnover. Submit résumé and two letters of recommendation to: Dr. Steven D. Cohen, Section of Pharmacology and Toxicology, Director, Program in Toxicology, School of Pharmacy, UNIVERSITY OF CONNECTICUT, Storrs, Conn. 06268. Dr. Cohen may be contacted through SOT Placement Service at the annual meeting in San Diego. Search Number S-230. Affirmative Action/Equal Opportunity Employ-er. pr

POSTDOCTORAL IN MOLECULAR GENETICS available immediately with multidisciplinary re-search team to transfer resistance factors for pesti-cides and insects into susceptible plants. Ph.D. in biochemistry, molecular biology, or related area; experience with plant tissue culture, enzymology and nucleic acid techniques desirable. Initial ap-pointment for 1 year; reappointment based upon satisfactory performance. Send curriculum vitae, relevant publications, and names of three references by 29 March 1985 to: Dr. C. W. Pitts, Head, Depart-ment of Entomology, Box 50, 106 Patterson Building, Pennsylvania State University, University Park, Pa. 16802. An Affirmative Action/Equal Opportunity Employer. Employer

POSTDOCTORAL POSITION. Fluorescence pho POSTDOCTORAL POSITION. Fluorescence pho-tobleaching recovery, image analysis, and related studies of lateral and rotational motions of cell surface molecules during immunological processes. Available April 1985; salary commensurate with qualifications. Send résumé and two letters of refer-ence to: Dr. George Barisas, Chemistry Department, Colorado State University, Fort Collins, Colorado 80523. An Equal Opportunity/Affirmative Action Employer Employer.

POSTDOCTORAL POSITION

The Northwest College and University Association for Science (NORCUS) announces a postdoctoral appointment at the Department of Energy's Pacific Northwest Laboratory operated by Battelle to con-duct research into the metabolism of fossil energy related organics and their interaction with DNA. Research will involve a multidisciplinary team in-cluding toxicologists, biologists, and analytical chemists. The successful applicant will have a Ph.D. with experience in biochemical toxicology, nucleic acid biochemistry, or molecular biology. This 1-year appointment with possible option for a second year carries a stipend of \$20,000 to \$24,000, depending on experience.

U.S. citizenship required.

Inquiries and résumés should be sent to: NORCUS, Joint Center for Graduate Study, 100 Sprout Road, Richland, Washington 99352. Telephone: 509-375-3090.

POSITIONS OPEN

POSTDOCTORAL POSITION available July 1985 in diabetes research. Emphasis on insulin action, re-ceptor regulation, and insulin resistance. M.D. or Ph.D. with experience in molecular endocrinology and/or metabolism preferred. Send curriculum vitae and three letters of reference to: Dr. George Fantus, Division of Endocrinology, Royal Victoria Hospital, McGill University, Montreal, Quebec, Canada H3A 141

POSTDOCTORAL RESEARCH ASSOCIATE POSI-TIONS (TWO) available immediately. Recent Ph.D in immunology with expertise in the application of hybridoma technology and cell culture. Second posi-tion for recent Ph.D. in biochemistry preferred to work on biochemistry and immunology of nervous system antigens. Salary: \$19,000 to start. Send curriculum vitae and names of three references to: Dr. Terry Joe Sprinkle, VA Medical Center, Research Service (151), Neurochemistry Laboratories, Augus-ta, Ga. 30910. J2592. Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL RESEARCH ASSOCIATE-SOIL SCIENCE. Position with research unit work-ing on mechanisms of straw decomposition using a ing on mechanisms of straw decomposition using a mechanistic model and on nutrient cycling in no-till cropping systems. Training in soil microbiology re-quired. Send curriculum vitae and three letters of reference to: **Dr. L. F. Elliott, Department of Agron**omy and Soils, Washington State University, Pull-man, Wash. 99164-6421. One-year appointment with option for renewal. Screening starts 1 April 1985, but applicants will be accepted until suitable candidates are identified

POSTDOCTORAL RESEARCH ASSOCIATE to develop improved media for hematopoietic stem cells in a laboratory that specializes in analysis of cellular growth requirements and development of defined culture media. Candidates must have prior experi-ence with hematopoietic cells and be willing to learn ence with hematopoietic cells and be willing to learn advanced cell culture procedures. Research will be done in a university laboratory, supported by a contract from a private company. Send résumé and names of three references to: Dr. Richard G. Ham, Department of Molecular, Cellular & Developmental Biology, Box 347, University of Colorado, Boulder, Colo. 80309. Closing date for receipt of applications: 29 March 1985. The University of Colorado is an Evend Omosturing/Affirmative Action Evenlower Equal Opportunity/Affirmative Action Employer.

TWO POSTDOCTORAL RESEARCH ASSOCIATE **POSITIONS** are available for studies of the neuro-chemical bases of seizure predisposition in genetically epileptic animals. Studies will be focused on the relationship between abnormalities in neuroand the regulation of seizure susceptibility and se-verity. Requirements: Ph.D. in neuropharmacology, neurochemistry, or related discipline plus evidence neurochemistry, or related discipline plus evidence of future productivity as a neuroscientist. Experi-ence with electrophysiology is desirable but not essential. Positions available immediately. Salary: \$19,000 or higher, depending on credentials. The University of Illinois is an Affirmative ActionIEqual Opportunity Employer. Send curriculum vitae and names of three references to: Phillip C. Jobe, Ph.D., Decement of Resist Densetment of Resis Science names of three references to: Philip C. Jobe, Ph.D., Professor and Chair, Department of Basic Science, University of Illinois College of Medicine at Peoria, P.O. Box 1649, Peoria, Ill. 61656. Applications will be received until the position is filled.

POSTDOCTORAL RESEARCH POSITIONS are available in MOLECULAR PARASITOLOGY to study developmentally regulated membrane proteins of the protozoan parasite *Leishmania*. Strong back-ground in recombinant DNA technology and/or pro-tein chemistry is preferred. Starting salary based on experience. Positions available fall 1985. Applicants should send curriculum vitae, brief summary of should send curriculum vitae, brief summary of research interests, and the names and addresses of three references to: Dr. Diane McMahon Pratt, Yale University School of Medicine, Yale Arbovirus Re-search Unit, Department of Epidemiology and Public Health, 60 College Street, P.O. Box 3333, New Haven, Com. 06510-8034. Yale University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH POSITION now available for molecular studies on biochemical thology of liver cancer and carcinogenesis. Involves cell biology, protein chemistry, immunology, and ultrastructure. New laboratory near New York City. ultrastructure. New laboratory hear New York City. Send curriculum vitae and names of three references to: Dr. W. H. Massover, University of Medicine and Dentistry of New Jersey-New Jersey Medical School, 100 Bergen Street, Newark, N.J. 07103; for informa-tion, telephone: 201-456-5244. An Equal Opportuni-ty/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL POSITIONS available immediately for biochemists, biophysicists, and molecular biologists to study (i) the mechanism and regulation of gene expression in both prokaryotic and eukaryof gene expression in both prokaryotic and etkary-otic systems, and (ii) the nucleic acid-protein inter-actions. Send résumé and three letters of recommen-dation to: Professor Cheng-Wen Wu, Department of Pharmacological Sciences, State University of New York (SUNY) Stony Brook, Stony Brook, N.Y. 11794. SUNY, Stony Brook, is an Affirmative Action/Equal Opportunity Educator and Employer. AK Number 15-85.

POSTDOCTORAL POSITION available immediately for a 2- to 3-year term to study malignancy-related glycoconjugates. Applications are invited from individuals with recent Ph.D. and interest in using biochemical and immunochemical techniques for the biochemical and immunochemical techniques for the purification and characterization of cell surface gly-coproteins. Send curriculum vitae and names of at least three references to: V. P. Bhavanandan, De-partment of Biological Chemistry, M. S. Hershey Medical Center, Hershey, Pa. 17033.

POSTGRADUATE LEVEL POSITION IN NEUROBIOLOGY

Immediate vacancy at the Veterans Administration West Side Medical Center, Chicago, Illinois, to study anatomical, biochemical, and behavioral aspects of neural issues transplanted between ani-mals. Background in cell biology with experience in electron microscopy desirable. Individuals at the Ph.D. level are encouraged to apply. Position is for a 2-year term with possibility of renewal for an addi-tional 2 years. Salary: \$21,066 per annum, with federal benefits. For further details, contact: An-drew Waters, Personnel Service, telephone: 312-666-6500, extension 2482, Monday to Friday, 8 a.m. to 4:30 p.m.; or write to:

VA WEST SIDE MEDICAL CENTER Personnel Service (05) [or Mark J. Perlow, M.D. Neurology Service (127)] 820 South Damen Avenue Chicago, Illinois 60612 Equal Opportunity Employer

UNIVERSITY OF GUELPH

The Departments of Animal and Poultry Science and Food Science, University of Guelph, are seeking applicants for a **PROFESSOR/ASSOCIATE PRO-FESSOR/ASSISTANT PROFESSOR** (teaching/research/extension) in meat science and growth me-tabolism; tenure-track position.

The individual will have the responsibility of teaching diploma and undergraduate courses in meat science. An opportunity exists to develop a graduate course that is commensurate with his/her research program. The individual will be expected to develop an outstanding research program in poultry meat and have a research interest in the quality of poultry products (eggs). The individual must be able to interact with both the production and processing sectors of the poultry industry.

Qualifications include: a Ph.D. in a discipline of animal and poultry science or food science; working animal and poultry science or food science; working knowledge of poultry slaughter, grading and proc-essing for retail sale is desirable. An ability to communicate effectively and work harmoniously is expected. Citizenship is not a factor for consideration.

Applications will be accepted until 30 April 1985. Applications should include a complete résumé, transcripts, and a list of four references. Send to:

Dr. R. R. Hacker, Chairman Department of Animal and Poultry Science University of Guelph Guelph, Ontario, Canada N1G 2W1

Position subject to final budgetary approval.

RESEARCH ASSOCIATE to participate in the **RESEARCH ASSOCIATE** to participate in the development of research program on xanthene dyes. Responsibilities include research studies on bio-chemical, physiological, and toxicological principles which govern the photo-induced xanthene dye toxic-ity to insects, laboratory and field tests of xanthene dyes for insect control. Ph.D. in entomology with training in toxicology, biochemistry, and physiolo-gy. Two years of postdoctoral experience and famil-iarity with bioassay techniques, HPLC, fluores-cence microscopy, and computer modeling. Salary: \$17,600. Send résumé to: Dr. James R. Heitz, Bio-chemistry Department, Drawer BB, Mississippi State University, Mississippi State is an Equal Opportunity/Affir-

Mississippi State is an Equal Opportunity/Affir-mative Action Employer.



Research Positions in Biology

The University of Calgary, Department of Biology, invites applications for research positions in one or more of the following areas: plant molecular biology, plant population biology, fermentation biotechnology, and animal functional morphology. Successful applicants will be nominated for University Research Fellowships which will be awarded in open competition by the Natural Sciences and Engineering Research Council Canada. Appointment will be at the assis-tant professor level for up to five years. Remuneration will be based on the salary scale at The University of Calgary (1984 minimum: \$29,741).

Applicants must hold the Ph.D degree or its equivalent, have at least two years postdoctoral experience, and have a demonstrated ability to carry out independent research of a high quality. Appointees will be expected to devote the majority of their time to research although limited teaching duties and participation in Departmental affairs will be required.

All qualified individuals are encouraged to apply but pre-ference will be given to Canadian citizens and permanent residents.

Applications including a curriculum vitae, a brief description of research objectives and the names of three referees should be submitted before March 31, 1985 to:

The Chairman, Scholarship and Fellowship Review Committee, Department of Biology, University of Calgary, 2500 University Drive N.W., Calgary, Alberta, Canada T2N 1N4



Circle No. 232 on Readers' Service Card

TOXICOLOGISTS/ PATHOLOGISTS PHARMACEUTICAL RESEARCH

Significant staff expansion in conjunction with the completion of a new 90,000 square foot addition to our toxicology facility, has prompted Warner-Lambert/Parke-Davis Pharmaceutical Research Division to plan for a major addition of scientific personnel. This new laboratory is located at our research complex in Ann Arbor, MI, adjacent to the University of Michigan campus.

Our expansion plans will provide opportunities for the following: Board-certified pathologists, Ph.D. and MS level toxicologists, and experienced laboratory technicians. These specialists will participate in our team approach to drug discovery and will join other outstanding scientists who enjoy competitive compensation, benefits advancement opportunities, and living environment. We en-courage inquiries from all such qualified scientists who are seeking new career challenges in 1985. You may visit with our company representative at the annual Society of Toxicology Meeting March 18-22 in San Diego, or mail your resume and salary requirements in confidence to: Ms. Maggie Wolin, Sr. Human Resource Representative, WARNER-LAMBERT/PARKE-DAVIS, 2800 Plymouth Road, Ann Arbor, MI 48105. An equal opportunity employer m/f/h.

WARNER LAMBERT

Recent Advances In Primary And Acquired Immunodeficiencies

April 10-12, 1985 Boston, Massachusetts

Sponsored by Ares Serono Symposia.

This Symposium will cover the latest developments in: molecular genetics of the effector cells of the immune system, the molecular mechanisms of various forms of immunodeficiencies, and the role of interferons, thymic hormones and other lymphokines in immunotherapy.

Program topics include: ontogeny and activation of T and B cells, lymphokines, membrane defects, immunobiology of immu-nodeficiencies, AIDS, and immunotherapy of immunodeficiencies.

Invited speakers include: В

B. Benacerraf	R. Gatti
H. Colten	R. Geha
M. Cooper	S. Gilman
S. Cunningham-	G. Goldstein
Rundles	R. Good
M. Davis	S. Gupta
A. Fauci	A. Hayward
H. Fudenberg	J. Kappler
R. Gallo	S. Krown

R. Wedgwood F. Wong-Staal A limited number of short communications will be accepted for

F. Rosen

. Ross F. Ruscetti

Schlossman

T. Springer E. Unanue T. Waldmann

poster presentations. For registration information and abstract forms, contact: Dr. Ching Lau, Serono Symposia, USA, toll-free at 800/225-5185. In Massachusetts, 617/963-8154.

Serono Symposia, USA 280 Pond Street Randolph, MA 02368

PROJECT LEADER, PLANT GROWTH REGULA-TORS—O. M. Scott & Sons, the leading manufac-turer of lawn and garden products, has a career opportunity for a project leader, plant growth regula-tors, within our Research Division. The successful candidate will be responsible for the development of new and improved plant growth regulator products for turfgrass, ornamentals, and garden use. A Ph.D. degree in plant physiology is required with a strong background in weed science and biochemistry. Spebackground in weed science and biochemistry. Spe cific experience in field plot methods, plant growth regulators and/or weed control is a definite plus. Good communication and interpersonal skills are essential. Scotts offers an excellent salary and comprehensive benefit program. If you possess the above skills and want to be part of a progressive and dynamic research team, send your résumé in confidence to:

> Vincent R. Smothers Manager, Human Resources O. M. Scott & Sons Marysville, Ohio 43041

RESEARCH ASSISTANT (B.S. or M.S.) or **RE-SEARCH ASSOCIATE** (Ph.D.) experienced in recombinant DNA to conduct research involving gene cloning and transfer in eukaryotic cells. Com-petitive salary and fringe benefits. Qualified persons available immediately apply to: Dr. D. W. Bullock, Cell Biology, Baylor College of Medicine, Houston, Texas 77030.

RESEARCH ASSOCIATE position available immediately for Ph.D. to study gene regulation in yeast. Recombinant DNA techniques will be used to identify and overproduce regulatory proteins whose func-tion will be determined. Candidates with experience tion molecular biology or protein chemistry preferred. Salary range: \$17,000 to \$23,000. Send résumé and the names of three references to: Dr. Robert Dick-son, Department of Biochemistry, University of Ken-tucky, Lexington, Ky. 40536. An Equal Opportunity Employer.

Applications are being sought for a tenure-track **RESEARCH POSITION** in a biomechanics laboratory. Starting date desired is 1 April 1985, but is negotiable. Minimum qualifications include a master's degree in bioengineering or engineering me-chanics, with special interest in human engineering. Experience in electromyography is helpful but not required. Duties will include maintenance and operation of instrumentation laboratory in cooperation with several investigators; implementation of test protocols; design and construction of testing frames development of independent projects. Teaching re-sponsibilities are minimal. Salary range: \$26,000 to \$30,000, commensurate with experience. Applicants should sent statement of interest, current curriculum vitae, and names and addresses of three references to: Dr. John Triano, Director, Spinal Ergonomics and Joint Laboratory, National College of Chiropractic, 200 East Roosevelt Road, Lombard, Ill. 60148.

VICE PRESIDENT FOR AGRICULTURAL 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 Affairs and Provost, Division of Agricultural and Life Sciences. As vice president, this officer is the University's chief spokesperson on agricultural mat-ters and is responsible to the President for the University-wide coordination of agricultural pro-University-wide coordination of agricultural pio-grams 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 Chancel-per for Academic Affiner for the teaching research lor for Academic Affairs for the teaching, research, and Extension activities of the agricultural and life science 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 publica-tions 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, Presi-dent's Office, University of Maryland, Adelphi, Md. 20783. Deadline for nominations: 18 March 1985 or until a suitable candidate is appointed. The Universi-ty of Maryland is an Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE (postdoctoral) to study the neuronal mechanisms underlying the behavioral perceptual effects of hallucinogens and other related psychoactive compounds (for example, ergot alkaloids). While the laboratory has been using drug discrimination procedures primarily, the develop ment and refinement of other, more molecular tech-niques is encouraged (with the limits of available facilities and funding priorities). Opportunities to learn and utilize such techniques are available.

POSITIONS OPEN

Requirements: Ph.D. (or A.B.D.) in experimental psychology, pharmacology or related biomedical science. Expertise in computer programming and interfacing hardware with other laboratory equip-

ment is desirable but not mandatory. Contact: James B. Appel, Ph.D., Behavioral Phar-macology Laboratory, Department of Psychology, University of South Carolina, Columbia, S.C. 29208. An Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE IN MAMMALOGY. Qualifications: Ph.D. in vertebrate zoology (or M.S. and equivalent experience) with background in field studies of small mammals in all seasons in northern deciduous forests, populations dynamics, sophisti-cated data analysis and operation of modern instru-mentation, including microcomputers, radioteleme-tern, and evenese achieve. Condidates chardle here try, and oxygen analysis. Candidates should have superior supervisory skills and should work well with others. Research location is year round in Michigan's upper peninsula. Salary is commensurate with training and experience. Range: \$16,500 to \$19,500, starting. Good benefits. Send letter of introduction, résumé, and three letters of reference by 31 March 1985 to: Dr. Donald L. Beaver, Department of Zoology, Michigan State University, East Lansing, Mich. 48824. An Equal Opportunity/Affirmative Action Institution.

The U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), is seeking a **RESEARCH ASSOCIATE** to conduct research on the interactions of mycotoxins with food producing animals at the Mycotoxin Research Unit, Veterinary Toxicology and Entomology Research objectives are to definitively characterize biotransformation products of target chemicals in treated animals through the use of radiotracer, chromatographic, and spectro-metric techniques. Must have knowledge of organic and analytical chemistry and skill in the use of mass and NMR spectroscopy. Applicants must have re-ceived a relevant Ph.D. within the past 2 years. Salary levels are: \$26,381 (GS-11) or \$31,619 (GS-12) based on qualifications. Position is a non-career civil service position and the appointment may not exservice position and the appointment may not ex-ceed 2 years. Applicant must be a U.S. citizen. For application procedures contact: Deborah Lewis, USDA, ARS, Southern Region, Southern Plains Area, P.O. Box EC, College Station, Texas 77841, or tele-phone: 409-260-9443. Equal Opportunity Employer.

RESEARCH ASSOCIATE. Two positions are available immediately for work in the areas of cell membrane receptors and stimulus-secretion coupling. Candidates should have a Ph.D. in a biomedi-cal area or anticipate receipt of the degree within 6 months. Salary: \$17,000 to \$19,000. Send curriculum vitae, summary of research interests, and names of of Physiology, Emory University, Atlanta, Ga. 30322. Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE (POSTDOCTORAL)

Position available to study immunochemistry of insect venom proteins. Experience and interest in protein chemistry, immunology, and molecular biol-ogy desirable. Send résumé and three letters of recommendation to: T. P. King, The Rockefeller University, 1230 York Avenue, New York, N.Y. 10021. An Equal Opportunity Employer.

RESEARCH ASSOCIATE

Permanent position at university hospital. Immunol-ogist with biochemical background or immunochem-ist. Doctorate required. Work on immunochemical aspects of human cancer. Experience in antigen and antibody fractionation, labeling and immunoassays, and in PAGE and isoelectric focusing of glycoconjugates, and proteins necessary. Excellent salary and benefits. Send curriculum vitae and bibliography to: Dr. G. F. Springer, Director, Immunochemistry Re-search, Evanston Hospital, 2650 Ridge Avenue, Ev-anston, Illinois 60201.

Equal Opportunity Employer, M/F

POSITIONS OPEN

RESEARCH IMMUNOLOGIST

ASSISTANT PROFESSOR—The Division of Oncol-ogy and AIDS Activities at San Francisco General Hospital invites applications for an academic posi-tion with the University of California, San Francis-co, in the areas of cellular or viral immunology. Preference will be given to the individuals with a laboratory/clinical research background. The suc-cessful candidate will be expected to develop and conduct independent high quality research related to Acquired Immune Deficiency Syndrome (AIDS) and to participate in the Division of Oncology/AIDS Activities and Infectious Disease clinical and teaching activities. Completion of medical school and Board-eligibility in internal medicine is required. Doard-engionity in internal medicine is required. Submit curriculum vitae, a statement of research interests and activities, and three letters of recom-mendation to: Dr. Paul A. Volberding, Chairperson, Department of Medicine Search Committee, Division of Oncology, 995 Potrero, San Francisco General Hospital, San Francisco, Calif. 94110. University of California San Francisco, is an Affirmative Actional California San Francisco is an Affirmative Actional California San Francisco is an Affirmative Actional California, San Francisco, is an Affirmative Action/ Equal Opportunity Employer.

The Department of Pharmacology, University of Texas Health Science Center at San Antonio (UTHSCSA), Texas, has an opening for **RE-SEARCH INSTRUCTOR**, nontenure-track position SEARCH INSTRUCTION, Indicate Task, position to begin on or about 1 September 1985. Applicants for this position must have a Ph.D. in biochemistry with specific research interest in lipid biochemistry. Applicants must have demonstrated evidence of published research in the areas of lipid biochemistry. published research in the areas of lipid biochemistry. Applicants must have at least 3 years of postdoctoral research experience and 1 year of teaching experi-ence. Duties will involve both research and graduate teaching. Salary will be in the range of \$18,000 to \$22,000. The University of Texas Health Science Center at San Antonio is an Equal Opportunity Eventogenet Institution. Becopase should be add Employment Institution. Responses should be ad-dressed to: Dr. David H. Ross, Division of Molecular Pharmacology, UTHSCSA, 7703 Floyd Curl Drive, San Antonio, Texas 78284.

RESEARCH PLANT GENETICIST with Cereal and Soybean Improvement Research, Agricultural Re-search Service (ARS) of the U.S. Department of Agriculture (USDA). Position located on the Iowa State University Campus, Ames, Iowa. Career federal service. Candidates must show potential for developing a strong research program using the techniques of molecular biology and tissue culture to obtain fundamental knowledge that may lead to the improvement of soybeans. On-going soybean re-search programs include: genetics and cytogenetics, interaction of cutoalesmic and nuclear traits molecinteraction of cytoplasmic and nuclear traits, molec-ular genetics of nitrogen fixation, and breeding and physiology. Development of cooperative research physiology. Development of cooperative research programs will be strongly encouraged. Postdoctor-ate experience desirable. Salary: GS/M-12/13 (\$31,619 to \$48,876) based on qualifications and experience. Closing date for receipt of required federal application forms is 15 April 1985. For appli-cations, contact: Diana Gamble, USDA, ARS, NCR, Personnel Operations Branch, Building 003, Room 318H, BARC-West, Beltsville, Maryland 20705. Tel-berry, 201244 457, Corrdictor much be U.S. ephone: 301-344-367. Candidates must be U.S. citi-zens. An Equal Opportunity Employer.

STAFF TOXICOLOGIST

Prepare study proposals, study protocols, and protocol amendments. Interact with sponsor representa-tives, act as study director in departmental studies, and provide scientific support to staff. Ph.D. in pharmacology or toxicology or equivalent experi-ence required. Recent graduates are encouraged to apply.

International Research and Development Corporation is an independent contract research laboratory specializing in animal safety evaluation (toxicology) spectalizing in animal safety evaluation (toxicology) studies for the pharmaceutical, agricultural, chemi-cal, and consumer industries as well as governmen-tal agencies. We are located near Kalamazoo, Michi-gan, midway between Detroit and Chicago, in an area affording a broad range of urban or rural life-styles with excellent cultural and recreational oppor-tunities. We offer a competitive compensation, benefits and relocation package. Please send résumé to:

John Ragen Director of Personnel International Research and Development Corporation 500 North Main Street Mattawan, Michigan 49071 Equal Opportunity Employer

RESEARCH ASSOCIATE/POSTDOCTORAL POSI-TION in neurophysiology/neuroanatomy. Available 1 April 1985 to study the function of multiple cortical areas and cranial nerve nuclei in the motorsensory control of orofacial structures in non-human primates. Experience with CNS microstimulation, single unit recording, and anatomical tracing techniques is highly desirable. Position available for 1 to 2 years with renewal to 5 years. Salary commensurate with experience. Send résumé, brief description of research interests and experience to: Professor James H. Abbs, Speech Motor Control Laboratories, University of Wisconsin, Waisman Center, 1500 Highland Avenue, Madison, Wis. 53705-2280. Equal Opportunity/Affirmative Action Employer.

RESEARCH GEOPHYSICIST: The Graduate School of Oceanography of The University of Rhode Island is seeking a research geophysicist specializing in theoretical seismology for a research position within the marine geophysics group. Applicants should have experience with multi-channel seismic data processing, geophysical inverse theory, and the computation of synthetic seismograms in both laterally homogeneous and inhomogeneous media. Ph.D. in geophysics is rquired and a background in oceanography. Salary: \$28,300. Send résumé and names of three references to: **Robert J. Gray, Manager, Rhode Island Job Service, Government Center, Tower Hill Road, Wakefield, R.I. 02879.** An Affirmative Action/ Equal Opportunity Employer, M/F.

Cornell University, Division of Nutritional Sciences, is searching for candidates for a **RESEARCH AND TEACHING POSITION IN COMMUNITY NUTRITION.** This is a tenure-track position with rank and tenure status open depending on experience and qualifications of the applicant. Applicants should have a doctoral degree and experience appropriate to developing research and undergraduate and graduate teaching programs in community nutrition. Send résumés and names of three references to: M. C. Nesheim, Director, Division of Nutritional Sciences, Cornell University, 124 Savage Hall, Ithaca, N.Y. 14853. Cornell University is an Equal Opportunity/Affirmative Action Employer/Educator.

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE position available 1 June 1985 to study membrane glycoprotein assembly and dolichol phosphate metabolism in nervous tissue. Applicants with experience in tissue culture and immunology preferred. Send curriculum vitae and names of three references to: Dr. C. J. Waechter, Department of Biological Chemistry, University of Maryland School of Medicine, Baltimore, Maryland 21201; telephone: 301-528-6643.

POSTDOCTORAL RESEARCH ASSOCIATE position is available starting 1 April 1985 to study the mechanisms by which chemical carcinogens induce mutations in a model mammalian gene. The research will require the use of recombinant DNA techniques. Applicants should have experience in the field of molecular biology-biochemistry. Send curriculum vitae and names of three references to: D. Grunberger, Institute of Cancer Research, Columbia University, 701 West 168 Street, New York, N.Y. 10032.

Equal Opportunity/Affirmative Action Employer

SENIOR SCIENTIST—Hightech company in the Midwest. To set up laboratory for measuring electrical and magnetic properties of solids. Modify materials by ion implantation and study the change in properties of the modified materials by different surface analysis techniques such as Ruthorford backscattering. Prepare samples for transmission electron microscopy using Gatan dual ion mill. Intercalation of graphite fibers. Must have a Ph.D. in solid-state physics. Academic experience or training must have included measuring electrical properties of crystalline and amorphous solids; characterizing materials by x-ray diffraction, x-ray fluorescence, electrical conductivity, Hall effect, magnetic susceptibility and magnetic moment measurements; FOR-TRAN, PASCAL, and ASSEMBLY languages. Forty-hour week; 8 a.m. to 5 p.m.; \$30,000 per year. Qualified applicants send résumé with this ad to:

The Ohio Bureau of Employment Services P.O. Box 1618 Columbus, Ohio 43216 Attention: B. Phillips Reference Number 0724149

POSITIONS OPEN

The Department of Cardiovascular Research of the Cleveland Clinic Foundation is seeking qualified M.D.'s and/or Ph.D.'s for STAFF POSITIONS in the fields of molecular pharmacology, biochemistry, and endocrinology. Candidates with a minimum of 2 years of postdoctoral experience and a strong background in neurosciences will be considered. An interest, or previous expertise, in the central nervous system regulation of cardiovascular function is preferred. Special consideration will be given to those applicants having demonstrable experience in the use of molecular biology techniques.

The Cleveland Clinic Research Division is a highly productive interdisciplinary research group and ample opportunities are available for collaborative activities in a modern research facility. Clinical scientists may be considered for dual appointments in associated clinical departments (Cardiology, Endocrinology, Neurology, Psychiatry). The Cleveland Clinic is an internationally recognized health care provider combining the delivery of quality medical care with an on-going commitment to medical research and education.

Send curriculum vitae, a short summary of research goals, and three references to: Dr. Carlos M. Ferrario, Chairman, Department of Cardiovascular Research, Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, Ohio 44106.

The Department of Biology and Health Science invites applications for a tenure-track position which will be open September 1985. The successful candidate will be a **VERTEBRATE PHYSIOLOGIST** with a record of excellence in scholarship and teaching. Candidates will be expected to develop an externally funded research program and to be actively involved in teaching at both the undergraduate and graduate level. Applicants should send curriculum vitae, a statement of teaching and research interests, as well as three letters of recommendation to: **Dr. Ralph Aloisi, Chairman, Department of Biology and Health Science, University of Hartford, 200 Bloomfield Avenue, West Hartford, Conn. 06117**. The University of *Hartford is an Equal Opportunity/Affirmative Action Employer*.

Specialist in Aerospace Policy

THE LIBRARY OF CONGRESS Congressional Research Service

GS-16 \$61,296-\$68,700

QUALIFICATIONS: Three years of specialized experience, one year of which must have been at the GS-15 level in the Federal service or at a comparable level outside the Federal service, are required. The experience must demonstrate outstanding knowledge of a broad range of policy issues in the field of domestic, international cooperative, and foreign aerospace policy; the ability to analyze, interpret, and evaluate questions which bear upon governmental policy in the field; indepth knowledge of the legislative process; and the ability to assist in planning, organizing, and providing leadership for a complex research and public policy analysis program.

APPLICATION PROCEDURES: Applicants should call the Library of Congress Employment Office at (202) 287–5627 to request a copy of Vacancy Announcement No. 50033 and a Personal Qualifications Statement (Standard Form 171). Applications will be accepted for this position through March 21, 1985. Resumes will not be accepted in lieu of the Personal Qualifications Statement.

Civil Service Status Not Required Equal Opportunity Employer

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.

1 MARCH 1985

AAAS Memberships and Subscriptions	
 Whenever you write us about your member- ship or subscription, please attach a Sci- ence address label to ensure prompt ser- vice. 	
 Mail to: Membership and Subscription Rec- ords, AAAS, 1515 Massachusetts Ave., NW, Washington, D.C. 20005. 	
Change of Address: Please provide 6 weeks' notice. Paste an address label from a recent issue in the space provided. Print new ad- dress below.	HERE
□Query: If you have a question, place your address label here and attach this form to your letter.	
• To join or subscribe: Mail this form with your payment, mark the appropriate boxes, and print your name and address in the space below. (For renewals, attach label.)	
□ Membership rates (individual only) □ \$56 USA □ \$80 Canada □ \$83 Fo □ \$121 air-surface delivery via Holland	preign
□ Subscriber rates □ \$93 USA □ \$117 Canada □ \$120 I □ \$158 air-surface delivery via Holland	Foreign
□ Payment enclosed □ Bill me later	
Name Please print	······
Address	
City State Zip	SA16R53

STAFF POSITIONS AT CANCER RESEARCH CENTER

The La Jolla Cancer Research Foundation is a growing research institute located in the Torrey Pines Research Park, in close proximity to three other major bioscience institutions. The Foundation has been designated as a Basic Science Cancer Center by the National Cancer Institute and focuses on the relationships of cancer and mammalian development

The Foundation is expanding its scientific program and its physical facilities and is recruiting program leaders and staff scientists. The program goals are directed to oncogenes, growth factors, and the modirected to oncogenes, growth factors, and the mo-lecular and genetic aspects of cell migration and tumor metastasis. Candidates who have ongoing grant-funded projects related to these fields and want to be considered are invited to send their curriculum vitae to: Erkki Ruoslahti, M.D., Scientific Director, La Jolla Cancer Research Foundation, 10901 North Torrey Pines Road, La Jolla, Calif. 92047

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 experi-ence in either area is desirable but not essential. Appointments will be made for at least 2 years at an appointments will be made for at least 2 years at an Appointments will be made for at least 2 years at an annual salary up to \$25,000, depending on qualifica-tions 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.

An Affirmative Action/Equal Opportunity Employer

SYMPOSIUM

INTERNATIONAL SYMPOSIUM ON "BIOLOGY AND CHEMISTRY OF BASEMENT MEM-BRANES." The above symposium from 23 to 26 June 1985 will be held at Mishima, foothill of Mt. Fuji, in Japan. We are accepting posters for the meeting. Financial support for food and lodging is available for the selected participants. Interested persons should contact: Dr. Seiichi Shibata, Chair-man, Clinical Research Institute, National Medical Center, 1-Toyamacho, Shinjuku, Tokyo, 162, Japan, or in the United States, telephone: Dr. Mikio Ohno, liaison, 215-387-2255, for details.

ASSISTANTSHIPS

GRADUATE ASSISTANTSHIPS for qualified applicants pursuing an M.S. degree in biology beginning August 1985. Stipend of \$4,750 plus waiver of fees. August 1953: superior of 34,750 plus waiver of fees. Areas of potential emphasis include botany, ecology, microbiology, physiology, and zoology. For further information, contact: Dr. Milton S. Topping, Gradu-ate Coordinator, Department of Biology, Southwest Missouri State University, Springfield, Missouri 65804. An Equal Opportunity/Affirmative Action Eventower Employer.

FELLOWSHIPS

THE JOHN DOUGLAS FRENCH FOUNDATION FOR ALZHEIMER'S DISEASE IS PLEASED TO ANNOUNCE THE FORMATION OF A FELLOW-SHIP. The French Foundation is looking for talent-SHIP. The French Foundation is looking for talent-ed investigators, early in their training, who are interested in pursuing a career in Alzheimer's re-search. Ph.D. candidates, postdoctoral fellows, and M.D.'s will be considered for this award. The French Fellowship will last for 2 years, with a possible third year renewal at \$30,000 per year. Interested candites should write: Bruce L. Miller, M.D., The John Douglas French Foundation for Alzheimer's Disease, 11620 Wilshire Boulevard, Los Angeles, California 90049.

POSTDOCTORAL FELLOWSHIP-Research on the biochemical and molecular pharmacology of antineoplastic agents within a strong cancer-oriented andnetoplastic agents within a strong cancerone find molecular and cell biology program. Ph.D. in bio-chemistry preferred. Send curriculum vitae to: Dr. I. David Goldman, Chairman, Division of Biochemical Pharmacology, Department of Pharmacology, Medi-cal College of Virginia, Box 230, MCV Station, Rich-mond, Va. 23298.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS IN VISION RESEARCH EMORY UNIVERSITY, ATLANTA, GEORGIA

Postdoctoral fellowships to begin 1 July 1985 are now being offered by the Department of Ophthal-mology at Emory University in vision research. Individuals with M.D., D.V.M. and/or Ph.D. de-grees are sought. The program will allow training in several research areas: immunology, pharmacology, recombinant DNA - physiology, biochemistry, phys. several research areas: immunology, pharmacology, recombinant DNA, physiology, biochemistry, phys-iologic optics, and experimental pathology. Special emphasis will be placed upon research training in clinically relevant problems. Stipends are dependent upon the trainee's previous experience and will range up to \$30,000 per year. Applicants must be citizens or noncitizen nationals of the United States or must have been lawfully admitted for permanent varidency at the time of anorpintment Deadline for or must have been lawfully admitted for permanent residency at the time of appointment. Deadline for receipt of such applications is 31 March 1985. Appli-cants will be notified by 15 April 1985 of their acceptance into the program. Interested persons please contact: Dr. Henry J. Kaplan, Department of Ophthalmology, Emory University, 1365 Clifton Road, NE, Atlanta, Georgia 30322. Equal Opportuni-ty/Affirmative Action Employer.

THE UNIVERSITY OF SYDNEY PROFESSOR HARRY MESSEL RESEARCH FELLOWSHIPS IN PHYSICS

Applications are invited for the above postdoctor-al fellowships for research in physics in the Univer-sity of Sydney. The following fields of research are pursued in the School of Physics: plasma physics (Tokamak, gyrotron), solar energy (thermal photo-voltaics), astrophysics (synthesis radio-telescope), astronomy (Michelson stellar interferometer), high energy nuclear physics (neutrino physics), environ-mental physics (radio telemetry) and theoretical energy nuclear physics (neutrino physics), environ-mental physics (radio telemetry), and theoretical physics (pertaining to the foregoing experimental topics). Further information may be obtained by writing to the head of the school of Physics. The annual stipend shall be within the range for University of Sydney postdoctoral research fellow-ships (currently A\$21,411 to A\$23,903 per annum). The fellowships are tenable for one year but may be renewed from year to year

renewed from year to year.

The University reserves the right not to proceed

Applications close on 15 March 1985.

POSTDOCTORAL FELLOWSHIPS

Positions become available from time to time for persons with an M.D. or Ph.D. to conduct research as a member of a group in any one of the following areas: neurophysiology; electrophysiology and bio-physical theory; membrane phenomena, biophysics and active transport; cellular neurophysiology; car-diovascular physiology; circulation; respiration; be-havioral and sensory physiology; and physiology of the heart and muscle, or other related specialties. Applicants are expected to be familiar with ad-vanced research techniques relevant to the area of interest and must have strong academic background. interest and must have strong academic background. Stipends usually range from \$15,000 to \$35,000, depending upon postdoctoral experience. Appli-cants with own private funding will also be considered. Applicants should submit curriculum vitae with a list of publications and names of references to: Professor Wilfried F. H. M. Mommaerts, Chair-man, Department of Physiology, University of Cali-fornia, 53-259 CHS, Los Angeles, California 90024. The University of California is an Affirmative Action Employer with an Equal Opportunity Program. Women and minorities are encouraged to apply.

IMMUNODIAGNOSTICS Becton Dickinson Postdoctoral Fellowship

POSTDOCTORAL POSITION available immediate-**POSTDOCTORAL POSITION** available immediate-ly to study, evaluate, and participate in the develop-ment of novel non-isotopic immunoassay technolo-gies. Recent Ph.D. in organic chemistry, with good biochemical techniques or recent Ph.D. in biochem-istry with good knowledge in organic synthesis will be considered. Salary: \$23,000 per year and a reloca-tion allowance. This assignment will be at the Bec-ton Dickinson and Company Research Center in North Carolina's Research Triangle Park. Send cur-riculum vitae, a description of vour research inter-Ticulum vitae, a description of your research inter-ests, and the names of three references to: Dr. Daniel B. Wagner, Becton Dickinson and Company Research Center, P.O. Box 12016, Research Triangle Park, North Carolina 27709. An Equal Opportunity/ Affirmative Action Employer.

FELLOWSHIPS

POST- AND PREDOCTORAL FELLOWSHIPS IN REPRODUCTION. Applications are solicited for training and research experience in areas of mechatraining and research experience in areas of mecha-nisms of steroid hormone and receptor action, im-plantation, testicular cell functions and pituitary gonadotropin secretion. Nine investigators from the Department of Anatomy and Biochemistry partici-pate in this interdisciplinary NRSA supported pro-gram. Only U.S. citizens and permanent residents are eligible for appointment. Application deadline: 1 May 1985. Apply or inquire to: Dr. Kenneth L. Barker, Biochemistry, or Dr. Harry Weitlauf, Anato-my, Texas Tech Unviersity Health Sciences Center, Lubbock, Texas 79430. An Equal Opportunity/Affir-mative Action Employer. mative Action Employer.

POSTDOCTORAL FELLOWSHIPS in cardiovascu-lar science. Postdoctoral fellowships (NIH) for train-ing in the Departments of Biochemistry, Pharmacology, and Physiology are available for qualified appli-cants with D.O., D.V.M., M.D., or Ph.D. who desire advanced training in cardiovascular research. For more information, contact: Dr. J. E. Chimoskey, Department of Physiology, Michigan State University, East Lansing, Mich. 48824-1101. An Equal Opportunity/Affirmative Action Employer.

GRADUATE STUDY

GRADUATE STUDIES IN MEDICAL BIOCHEM-ISTRY. The Department of Biochemistry, Rush-Presbyterian-St. Luke's Medical Center in Chicago, invites applications from biology and chemistry graduates appreciations from biology and chemistry graduates for admission to its graduate program leading to the Ph.D. degree. Benefits include tuition waiver, stipends of at least \$6500 per annum, and an opportunity to work in pharmaceutical industry research laboratories in the United States and Europe. The department emphasizes research in connective tissue biochemistry. Contact: Dr. A. Bezkorovainy, Director of Graduate Program, Biochemistry Depart-ment, Rush-Presbyterian-St. Luke's Medical Center, Chicago, Ill. 60612.

TRAINEESHIPS

POSTDOCTORAL TRAINEESHIPS at the Universi-POSTDOCTORAL TRAINEESHIPS at the Universi-ty of Virginia in cancer cell biology, molecular biology, virology, and immunology supported by the National Cancer Institute. Highly competitive sti-pends and fringe benefits. Primary research interests (and supervisors) include: (i) immune regulation and hybridomas (Benjamin); (ii) cell and adenovirus transcription regulation (Beyer); (iii) erythroleuke-mia differentiation and membranes (Brown); (iv) viral/trypanosome transcription controls (Emerson); (v) molecular biology of histocompatibility gene (v) molecular biology of histocompatibility gene expression (Engelhard); (vi) venoms and protein sequencing (Fox); (vii) bacterial genetics/recombi-nant DNA (Kadner); (viii) *c-src* transformation/ growth regulation (S. Parsons); (ix) sarcoma virus growth regulation (S. Parsons); (IX) sarcoma virus DNA recombinants and sequencing (T. Parsons); (X) molecular organization and genetics of bacterial membranes (Schnaitman); (Xi) yeast histone gene DNA sequences and function (Smith); (Xii) molecular biology of leukemogenic viruses (Thomas); (xiii) viral hybridomas/monoclonal antibodies (Volk); (xiv) viral membranes and pathogenicity (Wagner); (xv) molecular events in viral transformation (We-

APPLICATIONS: Send curriculum vitae, description of research interests, and letters from three references to: Dr. Robert R. Wagner, Chairman, Department of Microbiology, Box 441, University of Virginia Medical School, Charlottesville, Virginia 22908.

MARKETPLACE

BIBLIOTECH ™	Call or Write
Professional Library & Reference Management Systems	ACADEMIC
For Apple II+, Ile & IBM PC, XT Computers	SOFTWARE
Menu driven and user friendly Multiple cross-indexing systems Rapid reference retrieval Prepares Bibliographies in any format Prices: IBM-PC \$150: Apple II \$175 + \$5.00 shipping in U.S.A	25824 Dundee Road Huntington Woods Michigan 48070 USA (313) 547-3433

Circle No. 268 on Readers' Service Card



9) Finland is the northernmost country which is selfsufficient in regard to basic foodstuffs. This is mainly due to our temperate climate and our advanced agricultural technology. Kemira has been contributing to the development of this technology for over 65 years with its fertilizers and pesticide control methods.

Finland is a highly industrialized country. The major fields of export are paper, metal and chemical industries.

Kemira is the largest Finnish enterprise in the chemical industry with a growing international role: Kemira and its subsidiaries now carry out production in eight countries. We are a multi-field chemical enterprise, fertilizers being our largest product group. Moreover, Kemira is one of the world's major exporters of fertilizers.

Agricultural chemistry is one of the main fields in our company. And, we invest a lot in its most rapidly developing branch – biotechnology. Our research programme of plant transform-

Our research programme of plant transformation now offers an opportunity for a post doctoral molecular biologist.

Here in Finland we have much untouched nature for a naturalist to examine, even during leisure time with the family. Work and accommodation, on the other hand, shall be situated close to Helsinki, Finland's modern capital which offers a lot in the way of cultural and other services. **39**

HEIKKI ROSENQVIST (Ph.D), KEMIRA RESEARCH CENTRE

AN EXPERT IN RECOMBINANT DNA TECHNOLOGY

Kemira furthers biotechnical research in its own research centre in Espoo. We also cooperate closely with leading American enterprises in the biotechnical field.

For this research programme we now invite applications from male or female researchers in plant molecular biology, preferably with a Ph.D. degree in the appropriate biological discipline. Candidates should possess a knowledge of recombinant DNA technology with plants and microbes as well as an interest in chemical applications of this research. Knowledge of the Finnish language is not necessary.

Kemira invests heavily in R & D in order to compete with the world's largest chemical companies. The work takes place in our modern research centre. The centre, which has a staff of 172 people, is one of the largest research facilities in Finland and offers excellent research resources in inspiring surroundings.

Kemira will give every assistance in all practical matters connected with moving, housing etc. For children the Helsinki area offers good opportunities for education in their own language. In addition to the free services of the national health programme, medical care is provided by the company for all employees.

Applications, including curriculum vitae and initial salary range, should be addressed to Kemira Oy, Espoo Research Centre, Box 44, SF-02271 ESPOO, by no later than March 31st, 1985.

Further information may be obtained from Dr. Heikki Rosenqvist or Dr. Ari Lokio, tel. int. + 358 0 88 00 11.

Kemira Oy, Fertilizer Division: fertilizers, pesticides. Chemicals Division: industrial and specialty chemicals. Säteri Division: viscose fibres. Mineral Chemistry Division: titaniumdioxide. Vihtavuori Division: explosives and safety equipment. Kemira Engineering: licences, engineering and equipment for the chemical industry. Turnover with subsidiaries: US\$ 1 billion. Personnel: 11,500.



Announcing a new book from Science

Neuroscience

This volume consists of 27 papers from *Science* representing the work of 84 researchers at private federal laboratories, hospitals, universities, and medical schools in six countries. The book presents discoveries made during the recent burgeoning in neuroscience research in areas ranging from genetic engineering to clinical therapy. Within its four sections — neuroplasticity, molecular biology, synaptic transmission, and behavior — the volume provides an integrative treatment of brain anatomy, physiology, and chemistry as it addresses fundamental questions concerning nervous system functioning. The volume is fully indexed and available in both hard and soft copies.

Topics covered

 Neuronal degeneration • Neurotransmitter plasticity • Cell recognition molecules Limb regeneration • Synaptic plasticity • Functional identification Cell adhesion molecules • Synaptogenesis regulation • Neuropeptides
 Brain specific messenger RNA • Postnatal brain development • Alternative RNA processing DNA markers • Neuronal mapping • Acetylcholine receptor • Ionic channels Neuronal excitability • Adenylate cyclase system • Neuronal phosphoproteins Signal transduction • Brain peptides • Drug and neurotransmitter receptors Pain control systems • Behavioral regulation • Learning • Memory Alzheimer's disease

Edited by

Philip H. Abelson, Editor, Science Eleanore Butz, Senior Editor, Science Solomon H. Snyder, Director, Department of Neuroscience, Johns Hopkins University School of Medicine

Hardcover \$29.95, AAAS member price \$23.95 ISBN 0-87168-309-1 Paperbound \$14.95, AAAS member price \$11.95 ISBN 0-87168-268-0 460 pages, illustrated with tables and figures

Order from AAAS Marketing Department, 1101 Vermont Avenue, NW, Department N, Washington, DC 20005 Available March 1985