

nated aldehydes and author and subject indexes. Among the topics planned for future Updates are nitrones, nitronates, and nitroxides; crown ethers; cyclopropyl radicals and ions; halogenation; synthesis of lactams and lactones; and synthetic applications of quinones.—K.L.

Atlas of Polymer Morphology. ARTHUR E. WOODWARD. Hanser, Munich, 1989 (U.S. distributor, Oxford University Press, New York). x, 531 pp., illus. \$185.

This is essentially a book of pictures—optical and transmission and scanning electron micrographs—with a text that, as the author states at the outset, “has been written as an aid to understanding the photographs and is not a critical review of the material available” on its subject. The atlas proper is preceded by two short chapters giving an introduction to polymer science generally (including tables of crystal structure and repeat units and physical state) and the methodology of morphological study. The 442 micrographs that occupy the remainder of the volume are organized into 10 chapters, with introductions ranging in length from 3 to 13 pages. The first three chapters illustrate structures crystallized from solution, from the melt, and during polymerization. Block copolymers, liquid crystalline polymers, blends and composites, and effects of processing, mechanical deformation, fracture, and chemical and other agents are shown in the subsequent chapters. The book is printed on heavy, coated paper, averaging about three micrographs to a page with brief captions, including sources, on facing pages. Some 30 of the micrographs, mainly showing liquid crystalline phases, are in color. A subject index is included.—K.L.

Books Received

Advances in Cancer Control. Innovations and Research. Paul N. Anderson, Paul F. Engstrom, and Lee E. Mortenson, Eds. Liss, New York, 1989. xx, 407 pp. \$84. Progress in Clinical and Biological Research, vol. 293. From a meeting, Washington, DC, March 1988.

Algebraic Homotopy. Hans Joachim Baues. Cambridge University Press, New York, 1989. xx, 466 pp., illus. \$89.50.

Alpha and Omega. Ethics at the Frontiers of Life and Death. Ernlé W. D. Young. Addison-Wesley, Reading, MA, 1989. x, 209 pp. \$19.95. A Portable Stanford Book.

Amorphous Silicon and Related Materials. Hellmut Fritzsche, Ed. World Scientific, Teaneck, NJ, 1989. 2 vols. xxvi, 1123 pp., illus. \$159. Advances in Disordered Semiconductors, vol. 1.

Antiterrorist Initiatives. John B. Wolf. Plenum. New York, 1989. xviii, 218 pp. \$29.50. Criminal Justice and Public Safety.

Atlas Florae Europaeae. Distribution of Vascular Plants in Europe. Jaakko Jalas and Juha Suominen, Eds. Cambridge University Press, New York, 1989. 3 vols. Vol. 1, Pteridophyta and Gymnospermae. Various pages. \$59.50. Vol. 2, Salicaceae to Balanophoraceae, Polygonaceae, and Chenopodiaceae to Basellaceae. Various

pages. \$69.50. Vol. 3, Caryophyllaceae. Various pages. \$89.50. Reprint, 1972–1986 eds.

Atlas of Uranus. Garry Hunt and Patrick Moore. Cambridge University Press, New York, 1989. 96 pp. \$24.95.

Autotrophic Bacteria. Hans G. Schlegel and Botho Bowen, Eds. Science Tech, Madison, WI, 1989. xiv, 528 pp., illus. \$85. Brock/Springer Series in Contemporary Bioscience. Based on a symposium, Göttingen, F.R.G., Aug. 1987.

Behavioral Teratogenesis and Behavioral Mutagenesis. A Primer in Abnormal Development. Ernest L. Abel. Plenum, New York, 1989. xii, 241 pp., illus. \$29.50.

Biochemistry of Photosynthesis. R. P. F. Gregory. 3rd ed. Wiley-Interscience, New York, 1989. xxii, 257 pp., illus. \$39.95.

Biological Delay Systems. Linear Stability Theory. N. MacDonald. Cambridge University Press, New York, 1989. xii, 235 pp., illus. \$59.50. Cambridge Studies in Mathematical Biology, vol. 8.

Biological Principles with Human Applications. Gideon E. Nelson. 3rd ed. Wiley, New York, 1989. xii, 435 pp., illus. Paper, \$34.50.

Blueprints. Solving the Mystery of Evolution. Maitland A. Edey and Donald C. Johanson. Little, Brown, Boston, 1989. xii, 418 pp., illus., + plates. \$19.95.

Brain and Behavior. Jan Bureš, Olga Burešová, and Jiří Krivánek. Wiley, New York, 1988. 304 pp., illus. \$64.95.

Broadband Matching. Theory and Implementations. Wai-Kai Chen. 2nd ed. World Scientific, Teaneck, NJ, 1988. \$76. Advanced Series in Electrical and Computer Engineering, vol. 1.

Calculus with Applications. Claudia Dunham Taylor and Lawrence Gilligan. Brooks/Cole, Pacific Grove, CA, 1989. xvi, 700 pp., illus. \$40.50.

Chemical Instrumentation. A Systematic Approach. Joward A. Strobel and William R. Heineman. 3rd ed. Wiley-Interscience, New York, 1989. xxvi, 1210 pp., illus. \$49.95.

Chemical Kinetics and Dynamics. Jeffrey I. Steinfeld, Joseph S. Francisco, and William L. Hase. Prentice Hall, Englewood Cliffs, NJ, 1989. xii, 548 pp., illus. \$35.

Chemistry and Computing. G. L. Breneman and O. J. Parker. Prentice Hall, Englewood Cliffs, NJ, 1989. x, 197 pp., illus. Paper, \$15.

The Chip War. The Battle for the World of Tomorrow. Fred Warshofsky. Scribner's, New York, 1989. xii, 434 pp. \$22.50.

Climate, Water and Agriculture in the Tropics. I. J. Jackson. 2nd ed. Longman Scientific, Harlow, U.K., and Wiley, New York, 1989. xiv, 377 pp., illus. Paper, \$39.95.

Common and Scientific Names of Aquatic Invertebrates from the United States and Canada. Mollusks. Donna D. Turgeon et al. American Fisheries Society, Bethesda, MD 1988. viii, 277 pp. + plates. \$30; paper, \$24; to AFS members, \$24 and \$19. AFS Special Publication 16.

Complex Information Processing. The Impact of Herbert A. Simon. David Klahr and Kenneth Kotovsky, Eds. Erlbaum, Hillsdale, NJ, 1989. x, 459 pp., illus. \$69.95; paper, \$29.95.

Computers in Geography. David J. Maguire. Longman Scientific, Harlow, U.K., and Wiley, New York, 1989. xx, 248 pp., illus. Paper, \$31.95.

Cosmic Rays. Michael W. Friedlander. Harvard University Press, Cambridge, MA, 1989. x, 160 pp., illus. \$27.50.

A Course in Mathematics for Students of Physics. Vol. 1. Paul Bamberg and Shlomo Sternberg. Cambridge University Press, New York, 1988. xviii, 405 pp., illus. \$49.50.

Current Issues in Hadron Physics. J. Tran Thanh Van, Ed. Editions Frontières, Gif-sur-Yvette, France, 1988. xii, 679 pp., illus. \$73. From a meeting, Les Arcs, France, March 1988.

Dark Matter. J. Audouze and J. Tran Thanh Van. Editions Frontières, Gif-sur-Yvette, France, 1988. xiv, 498 pp., illus. \$63. From a meeting, Les Arcs, France, March 1988.

Data Structures with Abstract Types and Pascal. Daniel F. Stubbs and Neil W. Webre. 2nd ed. Brooks/Cole, Pacific Grove, CA, 1989. xxiv, 471 pp., illus. \$46.

Designing and Programming Modern Computer Systems. Vol. 2, Supercomputing Systems. Svetlana P. Kartashev and Steven I. Kartashev. Prentice Hall, Englewood Cliffs, NJ, 1989. xx, 428 pp., illus. \$37.50.

Development of Preimplantation Embryos and Their Environment. Koji Yoshinaga and Takahide Mori, Eds. Liss, New York, 1989. xx, 474 pp., illus. \$96. Progress in Clinical and Biological Research, vol. 294.

From a symposium, Kyoto, Japan, July 1988.

A Dream of Wings. Americans and the Airplane, 1875–1905. Tom D. Crouch. Smithsonian Institution Press, Washington, DC, 1989. 349 pp., illus. Paper, \$14.95. Reprint, 1981 ed.

Dynamical Groups and Spectrum Generating Algebras. A. Bohm et al. World Scientific, Teaneck, NJ, 1988. 2 vols. xviii, 1138 pp., illus. \$190; paper, \$84.

Earthworms in Waste and Environmental Management. Clive A. Edwards and Edward F. Neuhauser, Eds. SPB, The Hague, 1988. viii, 388 pp., illus. Paper, \$90. Based on a conference, Cambridge, U.K.

East African Mammals. An Atlas of Evolution in Africa. Jonathan Kingdon. University of Chicago Press, Chicago, 1989. 4 vols. Vol. 3A, Carnivores. viii, 476 pp. Paper, \$37.50. Vol. 3B, Large Mammals. vi, 436 pp. Paper, \$37.50. Vols. 3C, Bovids. x pp. + pp. 1–394. Paper, \$32.50. Vol. 3D, Bovids. vi pp. + pp. 395–747. Paper, \$32.50. Reprint, 1977–1982 eds.

Ecological Impacts of the Oil Industry. Brian Dicks, Ed. Published for the Institute of Petroleum, London, by Wiley, New York, 1989. x, 316 pp., illus. \$180. From a meeting, London, U.K., Nov. 1987.

Ecology in the 20th Century. A History. Anna Bramwell. Yale University Press, New Haven, CT, 1989. xii, 292 pp. \$40; paper, \$16.95.

Ecosystem Management for Parks and Wilderness. James K. Agee and Darryll R. Johnson, Eds. University of Washington Press, Seattle, 1989. viii, 237 pp., illus. \$20. Institute of Forest Resources Contribution no. 65. From a workshop, Seattle, WA, April 1987.

'88 Electroweak Interactions and Unified Theories. J. Tran Thanh Van, Ed. Editions Frontières, Gif-sur-Yvette, France, 1988. xii, 599 pp., illus. \$73. From a meeting, Les Arcs, France, March 1988.

Estuarine Circulation. Bruce J. Neilson, Albert Kuo, and John Brubaker, Eds. Humana, Clifton, NJ, 1989. x, 377 pp., illus. \$79.50. Contemporary Issues in Science and Society. From a conference, Gloucester Point, VA, Jan. 1985.

Evolution, Learning and Cognition. Y. C. Lee, Ed. World Scientific, Teaneck, NJ, 1988. xii, 411 pp., illus. \$72.

Exponential Type Calculus for Linear Delay Equations. S. M. Verduyn Lunel. Centrum voor Wiskunde en Informatica, Amsterdam, 1989. vi, 125 pp., illus. Paper, Dfl. 19. CWI Tract 57.

The Field Naturalist. John Macoun, the Geological Survey, and Natural Science. W. A. Waiser. University of Toronto Press, Toronto, 1989. x, 253 pp. + plates. \$30. A biography of a man who “personified Canadian natural history in the mid-nineteenth century.”

First Aid Manual for Chemical Accidents. Marc J. Lefèvre, Compiler. 2nd ed. Van Nostrand Reinhold, New York, 1989. vi, 261 pp. \$26.95.

Food. The Chemistry of Its Components. T. P. Coulter, 2nd ed. Royal Society of Chemistry, London, 1988. xii, 325 pp., illus. Paper, £9.95.

Foodborne Bacterial Pathogens. Michael P. Doyle, Ed. Dekker, New York, 1989. xiv, 796 pp. \$150. Food Science and Technology, vol. 31.

Free. The End of the Human Condition. Jeremy Griffith. Centre for Humanity's Adulthood, Sydney, Australia, 1988. 228 pp., illus. Paper, \$A12.

Fundamentals of Anatomy and Physiology. Fredric Martini. Prentice Hall, Englewood Cliffs, NJ, 1989. xxx, 945 pp., illus. \$34.

The Fundamentals of Stellar Astrophysics. George W. Collins II. Freeman, New York, 1989. xxii, 494 pp. \$47.95.

Gas Phase Inorganic Chemistry. David H. Russell, Ed. Plenum, New York, 1989. xvi, 412 pp., illus. \$79.50. Modern Inorganic Chemistry.

Genes and Signal Transduction in Multistage Carcinogenesis. Nancy H. Colburn, Ed. Dekker, New York, 1989. xvi, 461 pp., illus. \$125.

The Genus in Zoology. A Contribution to the Theory of Evolutionary Systematics. Alain Dubois. Editions du Muséum, Paris, 1988 (distributor, Brill, Leiden, The Netherlands). 122 pp. Paper, Dfl. 56. Mémoires du Muséum National d'Histoire Naturelle A, vol. 140.

Geography and Resource Analysis. Bruce Mitchell. 2nd ed. Longman Scientific, Harlow, U.K., and Wiley, New York, 1989. xviii, 386 pp., illus. Paper, \$39.95.

The Geometry of Jet Bundles. D. J. Saunders. Cambridge University Press, New York, 1989. x, 293 pp. Paper, \$29.95. London Mathematical Society Lecture Note Series, vol. 142.

Glutathione Conjugation. Mechanisms and Biological Significance. Helmut Sies and Brian Ketterer, Ed. Academic Press, San Diego, CA, 1988. xvi, 480 pp., illus. \$95.

(Continued on page 660)

Products & Materials

Microplate Washer

The model 1550 microplate washer fills and washes all 96 wells of a microtitration plate simultaneously. Because all wells are washed and rinsed equally, well-to-well variation in absorbance readings is not artificially induced. An electronic control ensures



each plate is raised to the same position. In the automatic mode, the 1550 can dispense 100 to 300 μ l of wash fluid to each well, can allow soaking from 2 to 128 s, and aspirates the contents of the plate; the cycle can be repeated three to five times. An overflow tube at the rim of each well prevents cross contamination. Wash solution is pumped into the washer, not fed by gravity. Bio-Rad Laboratories, Chemical Division. Circle 446.

Custom Peptide Synthesis

Three grades of custom synthesized peptides are available. All come with high-performance liquid chromatography and amino acid analysis data; the two higher grades also come with a fast atom bombardment spectrometric analysis. Standard reagent-grade peptides undergo no purification after deprotection and cleavage from the resin. These peptides are supplied in quantities of 50 to 100 mg. Immunological reagent-grade peptides are about 80% pure and are appropriate for conjugation and antibody production. These peptides are supplied in quantities of 50 to 100 mg.

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

Bioassay reagent-grade peptides are more than 95% pure. These peptides are supplied in quantities of 10 to 25 mg. Bulk peptide synthesis service is available when greater quantities are required. Cambridge Research Biochemicals (United Kingdom). Circle 440.

Antibodies

Primary and secondary antibodies with a variety of specificities, all conjugated with R-Phycoerythrin. Sigma Chemical. Circle 461.

CBL 80 and CBL 81, monoclonal antibodies to human interleukin 2. Cymbus Bioscience (United Kingdom). Circle 462.

CBL 170, monoclonal antibody to human cytokeratins 8, 18, and 19. Cymbus Bioscience (United Kingdom). Circle 463.

CD-ROM Chromatography Database

CD-CHROM is a database on a CD-ROM (compact disk read-only memory) that contains more than 70,000 abstracts of articles about gas and liquid chromatography. These articles have appeared in journals from Western Europe, America, Eastern Europe, Asia, and Australia since 1951 for gas chromatography and since 1984 for liquid chromatography. The user can search the abstracts by field (such as the type of column used or the compounds separated) or by complete text. The accompanying search software supports Boolean operators and subset references; a typical search requires less than 30 s. CD-CHROM operates with IBM PC and compatible computers with 640 kilobytes of random access memory, a 5-megabyte hard disk, and a CD-ROM player. \$1295. Preston Publications. Circle 447.

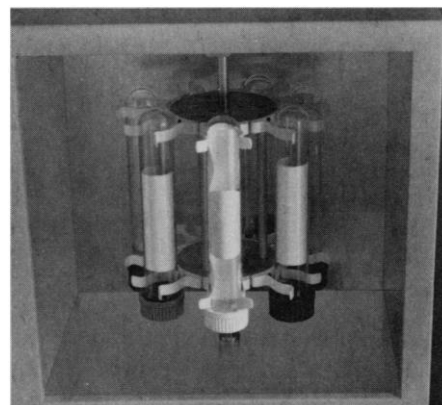
Spatial Imaging of Radioactive Samples

The 400A PhosphorImager reads images of radioactivity from electrophoresis gels and blotting membranes. The instrument's storage phosphor screen absorbs β and γ radiation emitted by isotopes in labeling experiments. The screen is then scanned with a red helium-neon laser beam, which causes the stored radiation to be released as blue photons. An integrating cylinder captures the photons, which are then digitized. Compared to autoradiography, storage phosphors offer several advantages. Because storage phosphors are denser and more sen-

sitive than photographic film, the researcher can get faster results or can reduce the dose of radioactivity. Also, storage phosphors have a wider dynamic range than x-ray film: with storage phosphors, bands can differ by a factor of 10,000. Another advantage is that exposures can take place at room temperature. Also, unlike film, the storage phosphor sheet can be reused indefinitely. Molecular Dynamics. Circle 451.

Incubator for Blotting

The Hybridization Incubator is a temperature-controlled device for wetting and heating RNA and DNA blots. A 6-rpm rotator can hold ten screw-cap glass tubes of sizes between 10 by 75 mm and 38 by 300 mm. Membranes between 2.5 and 25.4 cm



wide and as long as 50.8 cm can be accommodated. The design of the rotator ensures complete wetting of the membrane, which reduces the amount of probe used and results in sharper bands and lower background. Temperature is maintained within 0.5°C between ambient and 90°C. Because the unit has an inner glass door, membranes can be viewed without affecting temperature. The Hybridization Incubator measures 38.1 by 38.1 by 59.8 cm. Robbins Scientific. Circle 441.

Literature

Preconfigured HPLC Systems is a set of eight data sheets about high-performance liquid chromatography systems for gradient or isocratic elution, analytical or preparative sample loads, and manual or automatic injection. Gilson Medical Electronics. Circle 545.

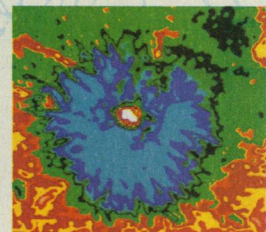
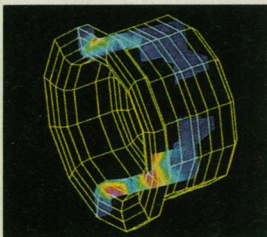
The brochure *A User Guide for Liquid Filters* tells how to install, sanitize, test, and store liquid filters. Domnick Hunter Filters. Circle 547.

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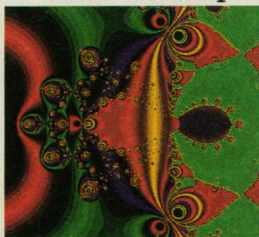
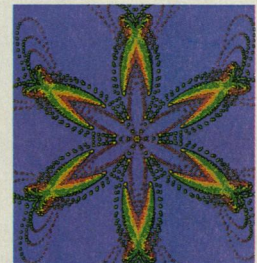
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(Continued from page 657)

Heat Kernels and Spectral Theory. E. B. Davies. Cambridge University Press, New York, 1989. x, 197 pp. \$49.50. Cambridge Tracts in Mathematics, vol. 92.

Highlights in Gravitation and Cosmology. B. R. Iyer *et al.*, Eds. Cambridge University Press, New York, 1989. xviii, 441 pp., illus. \$59.50. From a conference, Goa, India, Dec. 1987.

History of the Office of the Secretary of Defense. Vol. 2, The Test of War, 1950–1953. Doris M. Condit. Office of the Secretary of Defense, Washington, DC, 1988 (available from the Superintendent of Documents, Washington, DC). xvi, 701 pp. + plates. \$42.

Hypnosis. The Cognitive-Behavioral Perspective. Nicholas P. Spanos and John F. Chaves, Eds. Prometheus, Buffalo, NY, 1989. 511 pp. \$34.95. Psychology Series.

Ice Time. Climate, Science, and Life on Earth. Thomas Levenson. Harper and Row, New York, 1989. xiv, 242 pp. \$18.95.

Image Understanding in Unstructured Environment. Su-shing Chen, Ed. World Scientific, Teaneck, NJ, 1988. viii, 208 pp., illus. \$46; paper, \$28. World Scientific Series in Automation, vol. 2.

In Vitro Fertilization. Building Policy from Laboratories to Legislatures. Andrea L. Bonnicksen. Columbia University Press, New York, 1989. xii, 194 pp. \$28.

Inelastic Light Scattering in Crystals. M. M. Sushchinskiy, Ed. Nova Science, Commack, NY, 1989. x, 241 pp., illus. \$87. Proceedings of the Lebedev Physics Institute, vol. 180. Translated from the Russian edition (Moscow, 1987) by Michael L. Allen.

Inositol Lipids in Cell Signalling. Robert H. Mitchell, Alan H. Drummond, and C. Peter Downes, Eds. Academic Press, San Diego, CA, 1989. xxvi, 534 pp., illus. \$95.

An Introduction to Comparative Arachnology. L. van der Hammen. SPB, The Hague, 1988. x, 576 pp., illus. \$150.

Is Science Necessary? Essays on Science and Scientists. Max F. Perutz. Dutton, New York, 1989. xviii, 285 pp., illus. \$19.95.

Isotropy Subgroups of the 230 Crystallographic Space Groups. Harold T. Stokes and Dorian M. Hatch. World Scientific, Teaneck, NJ, 1988. Various pages. \$90.

Kinetics of Soil Chemical Processes. Donald L. Sparks. Academic Press, San Diego, CA, 1989. xvi, 210 pp., illus. \$34.95.

Laughing Matters. A Serious Look at Humour. John Durant and Jonathan Miller, Ed. Longman Scientific, Harlow, U.K., and Wiley, New York, 1989. viii, 136 pp., illus. \$19.95. From a meeting, Belfast, U.K., Aug. 1987.

Lectures on the Asymptotic Theory of Ideals. D. Rees. Cambridge University Press, New York, 1988. x, 201 pp. Paper, \$24.95. London Mathematical Society Lecture Note Series, vol. 113.

NASA Thesaurus. 1988 Edition. National Aeronautics and Space Administration, Washington, DC, 1988 (available as NASA SP-7064 from National Technical Information Service, Springfield, VA). 3 vols. Vol. 1, Hierarchical Listing, xii, 864 pp. Paper, \$40. Vol. 2, Access Vocabulary, viii, 402 pp. Paper, \$20. Vol. 3, Definitions, vi, 142 pp. Paper, \$15.

Sleep. J. Allan Hobson. Scientific American Library, New York, 1989 (distributor, Freeman, New York). xiv, 213 pp., illus. \$32.95.

Specialty Polymers/Polymer Physics. Yu. K. Godovsky *et al.* Springer-Verlag, New York, 1989. viii, 197 pp., illus. \$79. Advances in Polymer Science, vol. 88.

Supernova 1987A, One Year Later. Results and Perspectives in Particle Physics. M. Greco, Ed. Editions Frontières, Gif-sur-Yvette, France, 1988. x, 825 pp., illus. \$80. From a meeting, La Thuile, Italy, Feb.-March 1988.

Topics in Functional Analysis and Applications. S. Kesavan. Wiley, New York, 1989. xii, 267 pp. \$24.95.

Topological Methods in Chemistry. Richard E. Merrifield and Howard E. Simmons. Wiley-Interscience, New York, 1989. xii, 233 pp., illus. \$35.

Unit 731. Japan's Secret Biological Warfare in World War II. Peter Williams and David Wallace. Free Press (Macmillan), New York, 1989. xii, 303 pp. + plates. \$22.95.

Unstable Ideas. Temperament, Cognition, and Self. Jerome Kagan. Harvard University Press, Cambridge, MA, 1989. x, 318 pp. \$25.

Visual Editing on Unix. B. Srinivasan and K. Ranai. World Scientific, Teaneck, NJ, 1989. xviii, 182 pp. \$44.

When the Machine Stopped. A Cautionary Tale from Industrial America. Max Holland. Harvard Business School Press, Boston, 1989. xiv, 335 pp. \$22.95.

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POSITIONS OPEN

ASSISTANT PROFESSOR NORTHWESTERN UNIVERSITY

Applications are invited for a tenure-track position of Assistant Professor in the Department of Microbiology-Immunology, Northwestern University Medical and Dental Schools. Applicants are being sought whose research complements ongoing programs in virology, immunology, and microbial pathogenesis. Of particular interest is research on molecular aspects of the mammalian immune system. Primary criteria for appointment will be expertise in immunology and molecular biology, demonstrated research ability, potential for developing an internationally recognized research program, and commitment to effective teaching at the postgraduate level. In order to ensure full consideration, applications must be received by 15 November 1989. Please send curriculum vitae, summary of research interests, and the names of three references to: **Search Committee Chairman, Department of Microbiology-Immunology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611.** Northwestern University is an Affirmative Action/Equal Opportunity Employer. Employment eligibility verification required upon hire.

ASSISTANT PROFESSOR FACULTY POSITION IN FOOD CHEMISTRY. Tenure-track position, 50% teaching and 50% research. Candidate should possess a strong background and experience in the chemistry and biochemistry of foods. Teaching responsibilities in undergraduate and graduate food chemistry courses and supervision of graduate students. Develop a research program concerning the chemical aspects of lipids and flavor components with primary emphasis on aquatic foods. Salary commensurate with qualifications and experience. Applicants should send curriculum vitae, list of publications, transcripts, statement of objectives, and names of three individuals who will serve as references by 30 September 1989 to: **Dr. J. F. Gregory, III, Chairman, Search and Screen Committee, Food Science and Human Nutrition Department, University of Florida, 359 Food Science Building, 0163 IFAS, Gainesville, FL 32611-0163. Telephone: 904-392-1991.** UF is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ANATOMY, ASSISTANT PROFESSOR: A tenure-track position is available as assistant professor of anatomy. Needed are: Ph.D. training, ability to develop a strong and creative research program in cellular and/or molecular biology in normal and abnormal developmental mechanisms. Candidates expected to have or acquire experience in teaching anatomy to freshman medical students. Send curriculum vitae, research plans and objectives, and three letters of reference to: **Dr. Ronald P. Jensch, Search Committee, Department of Anatomy, Thomas Jefferson University, 1020 Locust Street, Philadelphia, PA 19107.** *Thomas Jefferson University is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR. The Department of Anatomy and Cellular Biology at Harvard Medical School invites applications for two assistant professor positions with a start date in summer or fall of 1990. Applicants should have an active research program in the general areas of cell, molecular, and/or reproductive biology. For one of the positions, preference will be given to mammalian early development and reproduction. Applicants should be willing to teach in a new course for medical students called *The Body*. This 8-week (120-hour) course treats both microscopic and gross anatomy briefly, and is the only required teaching commitment. Send curriculum vitae, bibliography, and three or four references by 1 November 1989 to: **Dr. Elizabeth D. Hay, Chairperson, Department of Anatomy and Cellular Biology, Harvard Medical School, 220 Longwood Avenue, Building B-1-342, Boston, MA 02115.** *Harvard University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR/ SLSTP PROGRAM DIRECTOR

An assistant professor position is open at Florida A&M University (FAMU) in the NASA sponsored Space Life Sciences Training Program (SLSTP). Duties include serving as a Program Director in conducting the day-to-day operations of the program under the FAMU/SLSTP Principal Investigator and in consultation with the Kennedy Space Center. An applicant must possess a Ph.D. degree in life sciences or related areas and some experience in teaching and research at a college or university. Please submit a detailed curriculum vitae and three letters of recommendation before 30 September 1989 to:

**Dr. Johnnie L. Early, II
Dean and Professor
College of Pharmacy and
Pharmaceutical Sciences
Florida A&M University
Tallahassee, FL 32307
Telephone: 904-599-3636**

FAMU is an Equal Opportunity and Equal Access Institution. Women and minorities are encouraged to apply.

ASSISTANT/ASSOCIATE PROFESSOR

Full-time tenure-track appointment at the rank of assistant/associate professor. Preference will be given to individuals with research interests in neurophysiology with emphasis at the cellular level. The successful candidate will be expected to develop an independent research program and to participate in the teaching of medical and graduate students. Applicants should have a Ph.D. and/or M.D. degree with postdoctoral experience. Send curriculum vitae, summary of research interests and names of three references by 1 October 1989 to: **Dr. Donald T. Frazier, Professor and Chairman, Department of Physiology and Biophysics, MS507 Medical Center, Lexington, KY 40536-0084.** *The University of Kentucky is an Equal Opportunity/Affirmative Action Employer.*

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

POSITIONS OPEN

Applications are invited for a tenure-track **ASSISTANT PROFESSOR** position to begin August 1990. Experience in recombinant DNA technology required, Ph.D. preferred. The successful applicant will teach recombinant DNA technology, molecular biology, microbiology or immunology, and introductory biology and will develop a research program that actively involves undergraduate and master's level students. Curriculum vitae should be submitted by 30 September 1989 to: **Dr. Richard Beil, Search Committee Chair, Biology Department, Chicago State University, 95th Street at King Drive, Chicago, IL 60628.** *CSU is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

ASSISTANT/ASSOCIATE PROFESSOR: The Department of Pathology and the Program in Molecular Medicine, University of California, San Francisco, invite applications for tenure-track positions in the areas of vascular biology, immunology, or human genetics. Applicants must have an M.D., M.D./Ph.D., or Ph.D., and will be expected to establish an independent, externally funded research program. In addition to participation in research, teaching, and clinical (if applicable) responsibilities of pathology, the candidate will be a member of the newly-established Program in Molecular Medicine, a branch of our highly successful and integrated Program in Biological Sciences. Applicants may apply for openings for July 1990 or 1991. Send curriculum vitae to: **Pathology and Molecular Medicine Search Committee, Department of Pathology, University of California, San Francisco, CA 94143-0506.** *An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

ASSISTANT/ASSOCIATE PROFESSOR POSITION

The Department of Fisheries and Allied Aquacultures, Auburn University, has an opening for a full-time, tenure-track position at the assistant or associate professor level. Candidates must hold a Ph.D. degree in fisheries biology or related area and must hold rank, or have experience, judged to be commensurate with the position at Auburn University. The position will involve research (60%) and teaching (40%) at the graduate level. The successful candidate will be expected to teach classes in fish population dynamics and the quantitative aspects of applied fisheries science and to advise graduate students at the M.S. and Ph.D. levels. Salary negotiable, commensurate with experience and qualifications. Positions available starting 2 October 1989. By 1 September 1989 submit letter of application and résumé with names and telephone numbers of three references to: **William Davies, Search Committee Chairman (205-844-4786), Department of Fisheries and Allied Aquacultures, Auburn University, AL 36849-5419.** *Auburn University is an Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.*

ASSOCIATE PROFESSOR CELL PHYSIOLOGY

The Department of Physiology at the University of Minnesota invites applicants for a tenured appointment at the level of associate professor in cell physiology beginning immediately. Selection will be based primarily on demonstrated excellence in research and its compatibility with other departmental programs. Applicants must have an established, independent research program primarily oriented in the area of vision neuroscience, with expertise in one or more of the following: glial cell physiology, retinal transport processes, dissociated cell/tissue culture and other cell physiology approaches, patch clamp and whole cell electrophysiological techniques. A tenure appointment requires that the applicant demonstrate a national and international reputation in research and experience and proficiency in teaching. The applicant will be expected to participate in the teaching and graduate education programs in the department. The last date for receipt of applications is 15 September 1989. Send curriculum vitae and a description of current research program to: **Dr. Richard Poppele, Department of Physiology, 6-255 Millard Hall, 435 Delaware Street SE, University of Minnesota, Minneapolis, MN 55455.**

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

POSITIONS OPEN

ASSISTANT PROFESSOR HONEY BEE BIOLOGY

The Department of Entomology, Ohio State University, is seeking a bee biologist (including behavior and genetics) to conduct research and teach apiculture and other courses in entomology on the Columbus campus. A newly built Bee Laboratory and Staff Apiarist position are available to support position. Ph.D. in entomology or related science required. Position available 1 November 1989 with applications accepted until 30 August 1989 or until a suitable candidate is found. Submit letter of application with a statement of research and teaching goals, résumé, transcripts, reprints, and names of five references to: **Professor L. R. Nault, Department of Entomology, Ohio Agriculture Research and Development Center, Wooster, OH 44691.** *The Ohio State University is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT/ASSOCIATE STAFF INVESTIGATOR

Biochemist with 2 to 7 years of experience to investigate blood coagulation and fibrinolysis using physical biochemistry techniques. Adequate background in protein chemistry and enzyme kinetics required. Excellent salary and fringe benefits, with opportunity for advancement. Send curriculum vitae to: **Dr. Joseph Shore, Division of Biochemical Research, Henry Ford Hospital, 2799 West Grand Boulevard, Detroit, MI 48202.**

ASSISTANT RESEARCH SCHOLAR/SCIENTIST

Applications are being accepted by the Center for Complex Systems at Florida Atlantic University. The successful applicant will participate in a new research and training program whose aim is to blend emerging concepts in complex systems (e.g., a nonlinear dynamics and "chaos theory") with specific experimental model systems in the behavioral and brain sciences.

Excellent research and computer facilities are available for analysis and theoretical modelling. Theoretically oriented individuals in physics, neurobiology and psychology (including neural networks) are invited to apply (Ph.D. required). The position is guaranteed for a minimum of 2 years with an annual salary of \$25,000. Send a brief summary of interests, curriculum vitae and three letters of recommendation by 30 September 1989 to: **J. A. S. Kelso, Center for Complex Systems, Florida Atlantic University, Boca Raton, FL 33431.** *FAU is an Affirmative Action/Equal Opportunity Employer.*

BIOCHEMIST, 40 hours per week, overtime not applicable, 9:00 a.m. to 5:00 p.m., \$25,000 per year, overtime not applicable. To devise, install and implement laboratory tests and prepare research reports on the studies of: synthesis of research biochemicals and pharmaceutical substances on laboratory and pilot scale; isolation and synthesis of carbohydrates and bulk pharmaceutical products; other research projects. B.S. in applied biochemistry, able to communicate clearly in both spoken and written English, must have courses in molecular biology, mammalian biochemistry, clinical biochemistry, and microbial pathogenicity. Applicants send résumés to: **Illinois Department of Employment Security, 401 South State Street—3 South, Chicago, IL 60605. Attention: Marie Ninneman, Reference No. 9446N.** An employer-paid ad.

CELLULAR IMMUNOLOGIST. The Department of Clinical Immunology and Biological Therapy seeks an outstanding cellular immunologist for tenure-track assistant professorship with competitive 12-month salary. Requires Ph.D. or equivalent experience in immunology and substantial research contributions. This position provides excellent opportunity for independent basic research with optional teaching. The successful applicant will be expected to develop strong research program in cellular and molecular immunology and interact with clinicians. Send curriculum vitae, statement of research and plans, and have three recommendation letters sent to: **Jordan U. Gutterman, M.D., Departmental Chairman, CIBT-41, University of Texas M. D. Anderson Cancer Center, 1515 Holcombe Boulevard, Houston, TX 77030.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CELL OR DEVELOPMENTAL BIOLOGY

The Department of Anatomy and Cell Biology at the University of Michigan Medical School invites applications for **ONE OR TWO TENURE-TRACK POSITIONS** at the assistant or possibly at the associate or full professor level. We seek individuals with a vigorous research program in which significant problems are approached with contemporary techniques. Teaching can be in neuroscience, histology, or gross anatomy. Candidates should send their curriculum vitae, reprints, statement of research interests, and have three letters of reference sent to:

Dr. Bruce M. Carlson, Chairman
Department of Anatomy and Cell Biology
University of Michigan Medical School
Ann Arbor, MI 48109-0616

The deadline for receipt of applications is 1 October 1989.

The University of Michigan is an Equal Opportunity Employer.

CHAIR OF BIOLOGY (PLANT AND ANIMAL BIOLOGY), Faculty of Science, The Australian National University. Applications are invited for a Chair of Biology (plant and animal biology) within the newly created School of Life Sciences in the Faculty of Science. The successful applicant will be expected to become Head of the Division of Plant and Animal Biology. The field of interest is as broad as possible within the context of the ecology, physiology, and evolution of the Australian terrestrial biota. Evolutionary biology has been identified as a significant program in the biological research profile of the faculty. It is also expected that this will be an area readily capable of providing links with the molecular programs in the Division of Biochemistry, Molecular and Cell Biology of the School of Life Sciences. The University is anxious to make the appointment as soon as possible, so that the successful applicant can participate in the establishment of the Division of Plant and Animal Biology and, perhaps, contribute to the teaching program in 1990. Closing date: 1 September 1989. Reference: FS 20.7.1. Salary: AU\$63,919 per annum. Appointment: to retiring age 65. Applications should be submitted in duplicate to: **The Registrar, The Australian National University, GPO Box 4, Canberra ACT 2601, Australia**, quoting reference number and including curriculum vitae, list of publications, and names of at least three referees. *The University reserves the right not to make an appointment or to appoint by invitation at any time. Further information is available from the Registrar. The University is an Equal Opportunity Employer.*

CHAIRPERSON DEPARTMENT OF BIOLOGY

The University of Miami is searching for a highly qualified individual for chairperson of the department. Candidates should have an active research program, demonstrated administrative skills and an ability to facilitate interaction among biologists with diverse interests. The chairperson will play a major role in filling three open, tenure-track lines. The department includes 21 faculty and has an established graduate program leading to the Ph.D. Several biology-related units of the University afford opportunities for collaboration. Candidates should submit curriculum vitae and the names of four references to: **Dr. William Evoy, Chairperson of Search Committee, Department of Biology, University of Miami, P.O. Box 249118, Coral Gables, FL 33124**. Deadline for application is 1 October 1989 or until the position is filled. *An Equal Opportunity/Affirmative Action Employer.*

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

Announcement

The Advanced Photon Source Project of Argonne National Laboratory is accepting nominations for Director, APS Accelerator Division. Project construction will begin in mid FY 1990 and commissioning is expected in FY 1995.

The Accelerator Division Director will provide leadership to a scientific, technical and administrative staff which will grow to about 150. The Director will also provide leadership in the areas of R&D, design, construction, testing and commissioning of the storage-ring and injector systems. To achieve this end, the Director will be responsible for attracting a high quality staff and will allocate divisional resources to meet technical, fiscal and project scheduling objectives.

Nominations should be received by Mr. Ronald A. Johns no later than September 1, 1989. Please address all correspondence to: Employment & Placement, Bldg. 201, Argonne National Laboratory, 9700 South Cass Avenue, Argonne, IL 60439. Argonne is an equal opportunity/affirmative action employer.



**ARGONNE
NATIONAL LABORATORY**

University of Chicago/DOE

BIOLOGICAL ELECTRON MICROSCOPIST

The Immunology Department of Merck, Sharp & Dohme Research Laboratories is seeking an electron microscopist to participate in immunoelectron microscopic studies of integrins and cytokines relevant to inflammatory diseases. Duties include production of ultrathin frozen sections, immuno-gold staining, and operation of the TEM. Applicants should have an M.S. in biology with 2-3 years experience in TEM; SEM training is desirable but not essential.

Merck Sharp & Dohme Research Laboratories are located in Rahway, New Jersey approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. Interested candidates should submit their curriculum vitae with the names of three references and salary requirements to: **Ms. Gaye L. Newton, R80M-TL1, Merck & Co., P.O. Box 2000, Rahway, NJ 07065**.

An equal opportunity employer



Merck & Co., Inc.

SENIOR RESEARCH ASSISTANT MOLECULAR GENETICS

THE JACKSON LABORATORY

THE JACKSON LABORATORY, a center for mammalian genetic research located on the coast of Maine, has an immediate opening for a Senior Research Assistant with a BS/MS, experience in molecular biology, and skills in Southern and Northern Blots, PCR amplification and sequencing of DNA. Program includes developing a methodology that would allow analysis of the molecular mechanism of gene conversion of mammalian MHC genes in vivo using mouse H-2K^b mutants as a model. Excellent opportunity for independent research. Please send curriculum vitae, transcripts and three letters of reference to:



**The Jackson
Laboratory**

Attn: Harold R. Wheeler
Employment Manager
600 Main Street
Bar Harbor, ME 04609
207/288-3371, ext. 1281

EOE/Affirmative Action Employer

The Health Effects Institute Request for Applications for Research Funds

The Health Effects Institute Announces its 1989 Request for Applications (RFA's).

The Health Effects Institute is a non-profit corporation that supports studies to evaluate the health effects of automotive emissions. It is funded jointly by the U.S. Environmental Protection Agency (EPA) and the automotive industry. Current research is investigating the health effects of a wide variety of pollutants, such as aldehydes, carbon monoxide, diesel exhaust, methanol, nitrogen dioxide and ozone.

Applications are now being solicited for research in the following areas:

RFA 89-1: Health Effects of Methanol Exposure:

- Metabolism and Pharmacokinetics
- Fetal and Perinatal Neurotoxicity
- Reproductive Toxicity

RFA 89-2: Health Effects of Chronic Ozone Inhalation: Collaborative National Toxicology Program-Health Effects Institute Studies:

- Structural Studies
- Studies of Respiratory Function
- Connective Tissue Components

The ozone studies will be administered in two phases:

- **Phase I (RFA 89-2):** Applications are requested for pilot studies as well as non-binding pre-proposals for Phase II projects.
- **Phase II (RFA 90-1):** The Health Effects Institute will support studies on selected animals from the National Toxicology Program chronic ozone bioassay. Requests for full applications will be issued in 1990 (RFA 90-1) for animals available in 1991.

Preliminary applications are also being solicited for other research designed to assess or develop new methods for the assessment of health effects of automotive emissions.

Materials describing the Health Effects Institute, more specific details of the research topics, and preparation of applications are available.

Requests and inquiries should be directed to:

Dr. Jane Warren, Director of Research
The Health Effects Institute
215 First Street
Cambridge, MA 02142
(telephone 617/491-2926)

Letters of intent for RFA 89-1, RFA 89-2 and non-binding pre-proposals should be submitted no later than September 29, 1989; applications will be accepted until October 30, 1989. Preliminary applications will be accepted at any time.

The Health Effects Institute

Research Scientists

TRITON BIOSCIENCES INC., an emerging pharmaceutical and diagnostics company, is focused on pharmaceutical development opportunities in the areas of cancer, AIDS and other serious diseases. We currently have the following excellent employment opportunities in our Research and Development areas.

Toxicologist—Mammalian Studies

Your duties will entail coordinating toxicology studies for therapeutic compounds including designing protocols, selecting contract laboratories evaluating/summarizing ongoing studies and finalizing reports for regulatory submission. Additionally, you will have responsibility for ADME and mutagenicity studies. You should have a PhD with 0-3 years' related experience with a demonstrated orientation toward regulatory (FDA) toxicology and scientific evaluation. Good interpersonal skills including the ability to interact well with scientists outside the company (contract laboratory personnel, etc.) are required as is a willingness to travel when necessary. Reply to Job #89037.

Process Development

You will develop sensitive physiochemical assays for proteins in support of process and product development activities including performing bioanalytical method development, HPLC, electrophoresis, IEF, peptide mapping, N- and C-terminal sequencing, immunological methods, spectroscopy and other protein characterization methods. You should have a PhD in a related area and 3 or more years' related experience. Refer to Job #89019.

Research Supervisor—Tumor Studies

You will coordinate and expand research efforts involving animal models and ascites production. You will work both independently and cooperatively with other scientists to support R&D programs in the areas of oncogene products, growth factors and monoclonal antibodies. You should have a PhD in Pharmacology, Immunology, or related area, and experience in tumor model systems and pharmacokinetic analysis. Excellent communication skills are essential. Refer to Job #880RM.

TRITON offers competitive salaries and benefits, including relocation assistance. For consideration, send your resume with cover letter, noting appropriate Job number, and highlighting your skills and experience to TRITON BIOSCIENCES INC. 1501 Harbor Bay Parkway, Alameda, CA 94501. EEO/AA employer.



Triton Biosciences Inc.

POSITIONS OPEN

CHAIRPERSON DEPARTMENT OF BIOCHEMISTRY

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

CHAIRPERSON DEPARTMENT OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH

The Graduate School of Public Health, University of Pittsburgh invites applications or nominations for the position of chairperson of the new Department of Environmental and Occupational Health. That department is to include programs in environmental chemical hazard assessment, industrial hygiene and air engineering, toxicology, health aspects of water quality, industrial environmental health, occupational health and medicine, health physics, radiobiology, environmental radiation chemistry, radiological physics and engineering, and radiation medicine. Graduate degrees only are offered at the master's and doctoral levels.

Candidates must possess substantial experience in academic aspects of at least one of the above fields. Research, teaching, professional operational experience, and administrative expertise will be given major consideration. The appointment will be as a full professor with salary commensurate with qualifications. Applications will be accepted until the position is filled.

Send curriculum vitae, publication list, and brief synopsis of research, teaching, and operational experience to: **Chairperson, Environmental and Occupational Search Committee, Room 318 GSPH, University of Pittsburgh, Pittsburgh, PA 15261. An Affirmative Action/Equal Opportunity Employer.**

DEAN COLLEGE OF PUBLIC HEALTH UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER

The University of Oklahoma Health Sciences Center invites applications and nominations for the position of Dean, College of Public Health. The position is available 1 July 1989.

The Dean should be an academic leader who can sustain effective working relationships and liaison with the central administration and academic deans within the university and with diverse professional and non-professional groups in the community, state, and nation. Current knowledge of issues and trends in public health and higher education is expected. Candidates should evidence distinction in the field of public health. An earned doctorate in an appropriate field is required. Individuals with demonstrated competence in teaching, research, and service in academic public health; public health practice; and administration will be given preferential evaluation.

Send nominations or a letter of application and résumé to: **Dr. Edward N. Brandt, Jr., Executive Dean, College of Medicine, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, OK 73190. A review of applications will begin no later than 30 September 1989.**

An Affirmative Action/Equal Opportunity Employer.

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

Syracuse University is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

DEPARTMENT HEAD MOLECULAR AND CELL BIOLOGY PENN STATE

Applications and nominations are invited for the Headship of the Department of Molecular and Cell Biology at Penn State. Candidates are expected to have the terminal degree in one of the fields represented by the department, an established national and international reputation for research, experience in administration, and a commitment to education.

The department is young and vigorous, and encompasses research and teaching programs in biochemistry, microbiology, and molecular and cell biology. The 35 faculty members engage in graduate and undergraduate instruction and in individual and collaborative research programs. The department also has 5 instructors, 8 technical support staff, and approximately 85 graduate students. A Center for Cell Research, in which the effects of microgravity are studied, was recently established with a grant from NASA. Strong interactions exist among faculty in the department, and with faculty in the Department of Chemistry, the College of Agriculture, and the recently established Biotechnology Institute.

Applications will be reviewed beginning 25 August 1989, and will continue until the position is filled. Candidates should submit curriculum vitae and the names of five references to:

**Chairman of the Search Committee
MCB Headship
Box M-S, 211 Whitmore Laboratory
The Pennsylvania State University
University Park, PA 16802**

*An Affirmative Action/Equal Opportunity Employer
Women and minorities encouraged to apply.*

DEPUTY DIRECTOR, NATIONAL VACCINE PROGRAM—The U.S. Department of Health and Human Services is seeking applicants for this Senior Executive Service position. The Deputy Director is responsible for the overall management of the National Vaccine Program and reports directly to the Assistant Secretary for Health, who is also the Director of the Program. The position will close on 15 September 1989. Contact: **Ms. Jennie Mason at 301-443-6900** for more information/instructions. *DHHS is an Equal Opportunity Employer.*

FACULTY POSITION, MICROBIAL PATHOGENESIS. Applications are invited for a tenure-track appointment at the assistant or associate professor level in the Department of Microbiology and Immunology, University of California, Los Angeles (UCLA), School of Medicine. Applicants should have a Ph.D. (or equivalent degree) and research interest in the pathogenesis of microbial diseases caused by bacteria or fungi. The candidate selected will participate in a program in molecular pathogenesis currently supported by an NIH training grant, in addition to teaching medical and graduate students. Salary and benefits will be commensurate with the candidate's qualifications. Applications should be submitted by 1 November 1989, and should be comprised of a letter of application, a complete curriculum vitae, copies of two recent publications, and names and addresses of three references. The complete application package should be submitted to: **Dr. Dexter H. Howard, Chairman of the Microbiology Search Committee, Department of Microbiology and Immunology, UCLA School of Medicine, Los Angeles, CA 90024-1747. UCLA is an Affirmative Action and Equal Opportunity Employer.**

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

POSITIONS OPEN

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

FACULTY POSITION

The Department of Microbiology and Immunology, East Carolina University School of Medicine, invites applications for tenure-track positions at assistant or associate professor levels. Applicants must hold a Ph.D. or equivalent degree and have at least 2 years of postdoctoral training. Associate professor candidates must have an established, well-funded research program. Preference will be given to candidates having considerable experience in the application of molecular biology techniques to study problems in virology, eukaryotic molecular genetics, or immunology. Successful candidates will be expected to develop/maintain a vigorous, grant-supported research program. Teaching in medical and graduate courses, and participation in the training of medical students, graduate students, and postdoctoral fellows is required. Salaries and research start-up support are nationally competitive. Submit curriculum vitae, description of research interests, and names of three references to: **Paul V. Phibbs, Chairman, Department of Microbiology and Immunology, School of Medicine, East Carolina University, Greenville, NC 27858-4354. An Equal Opportunity/Affirmative Action Employer. Federal Law requires proper documentation of identity and employability at the time of employment. It is requested that this documentation be included with your application.**

FACULTY POSITION HARVARD MEDICAL SCHOOL/ BRIGHAM AND WOMEN'S HOSPITAL

The Vascular Research Division, Department of Pathology, invites applications for a faculty position (instructor-assistant professor) in the area of vascular cell biology/molecular biology. Applicants (M.D., Ph.D., Ph.D./M.D.) will be expected to develop an independent research program with external funding, as well as to interact with members of an established vascular research group in areas of mutual interest.

Candidates should, by 15 September 1989, send their curriculum vitae and bibliography, names of three references, and description of research interests to:

**Dr. Michael A. Gimbrone, Jr.
Director, Vascular Research Division
Department of Pathology
Brigham and Women's Hospital
75 Francis Street
Boston, MA 02115**

An Equal Opportunity Employer.

HEAD AND PROFESSOR DEPARTMENT OF EXPERIMENTAL STATISTICS LOUISIANA STATE UNIVERSITY/ LOUISIANA AGRICULTURAL EXPERIMENT STATION

The Department of Experimental Statistics offers a Masters of Applied Statistics, furnishes the primary source of statistical teaching and research, and fulfills the statistical consulting needs of the Agricultural Experiment Station. The faculty consists of 13 tenure-track positions and several research associates and other faculty as funds permit. The Head must have substantial experience in applied statistics. Any person with a Ph.D. in statistics or related area with research experience in the statistical aspects of that discipline will be considered.

Applications will be accepted until 8 December 1989 or until a suitable candidate is identified. Applications should include curriculum vitae with a list of publications. Reference letters from five persons should be sent to:

**Dr. Stanley B. Carpenter, Chairman
of Search Committee
School of Forestry, Wildlife, and Fisheries
Louisiana State University
Baton Rouge, LA 70803-6202
Telephone: 504-388-4131**

Cardiovascular Drug Discovery

Atherosclerosis Program

Senior Scientists/Research Associate Ph.D. Level

The Atherosclerosis Drug Discovery Program at the Parke-Davis Pharmaceutical Research Division of Warner-Lambert has the following positions available immediately.

Qualified applicants will have the equivalent of a Ph.D. and 3-8 years' post-doctoral experience in one of the following research areas. Depending upon experience, candidates may be considered at the group-leader level for the positions in Atherosclerosis Pharmacology.

Atherosclerosis Pharmacology

Arterial Wall Cell Biology - The ideal candidate should be a proven independent researcher with an emphasis focusing on specific aspects of arterial wall cell biology as it relates to lipoprotein metabolism and atherosclerotic disease. A strong background in the following specialties is highly desirable and will be given special consideration: molecular biology, enzymology, immunology and lipid biochemistry.

Hepatic Lipid and Lipoprotein Metabolism - The successful candidate for this position should have proven independent research experience in the study of enzymes and cellular processes important to hepatic cholesterol, apolipoprotein and lipoprotein metabolism. Specific experience in lipid biochemistry, molecular biology, cell biology and pharmacology is highly desirable and will be emphasized in selecting the competitive candidate.

Comparative Lipoprotein Physiology - As an active member of a diversified drug discovery program, the competitive candidate should have proven independent research experience in the establishment of new animal models mimicking human dyslipidemias and atherosclerosis. Experience with non-human primate lipoprotein metabolism is highly desirable and will be given special consideration. Evaluating drugs for their effects on lipoprotein composition, distribution and kinetics as they relate to atherosclerosis will be a major responsibility of this position.

Biochemistry/Molecular Biology

Molecular Biologist - An excellent career opportunity exists in the newly formed Molecular Biology Department for a Group Leader. The successful candidate will have 5-8 years' post-doctoral experience in modern molecular biology, the desire to continue to conduct research in molecular aspects of atherosclerosis and a proven ability to lead a growing group of Ph.D. and assistant scientists in a highly interactive environment. In addition, the Group Leader will act as a liaison with Senior Molecular Biologists involved in drug discovery at collaborating leading biotechnology laboratories with which we collaborate. Effective oral, written and interpersonal skills and supervisory experience are required.

Enzymologist/Protein Biochemist - The successful candidate should have post-doctoral experience in enzymology or protein biochemistry with independent research directed toward the function of important enzymes involved in lipoprotein metabolism. This person will work closely with a rapidly growing molecular biology group and pharmacologists focused on novel therapies for the treatment of atherosclerosis.

Assistants/Associate Scientists BS/MS level Atherosclerosis Pharmacology

Several positions are open to provide technical support to the Ph.D. level openings described. Individuals with B.S./M.S. Degrees with 0-6 years' experience in lipid lipoprotein and atherosclerosis research will be considered. Technical expertise in the following areas are desired: analytical methods (HPLC, electrophoresis, spectrophotometry, etc.), molecular biology technique, histological/immunohistochemical analysis of lesions, cultured cells, the use of radiolabeled precursors, isolation of subcellular organelles and/or working with a variety of animal species to determine potency/efficacy of new drug candidates.

Cardiovascular Pharmacology

We are seeking an experienced candidate to assume responsibility for designing and performing experimental protocols evaluating the cardiovascular effects of new therapeutic agents. The successful candidates should possess a B.S./M.S. degree in pharmacology, biology or a related field with 3-5 years' experience. Additional experience should include monitoring of hemodynamic parameters in laboratory animals, surgical skills with chronic implants of cardiovascular instrumentation and a knowledge of ECG interpretation. Demonstrated oral and written communication skills are essential and familiarity with statistical analysis and computer usage are desirable.

Biochemistry/Molecular Biology

Positions are available for B.S./M.S. molecular biologists to assist in studies of important enzymes or other proteins involved in atherosclerosis and lipid metabolism within the department of molecular biology. The studies will involve cloning, expression, purification and characterization of target proteins. Applicants with experience in cellular and molecular biology, including proficiency in recombinant cloning and expression techniques, restriction digestion, DNA sequencing, bacterial transformations, or mammalian and insect expression systems are encouraged to apply.

Our modern research facilities, located in Ann Arbor, Michigan and adjacent to the University of Michigan campus, are devoted exclusively to the discovery and development of new drugs. We offer excellent compensation and benefits in a region which provides highly desirable living and working environment.

Interested candidates please specify area of interest, and forward curriculum vitae and salary requirements to:
Mr. Bill Burmeister, Human Resources, Parke-Davis, 2800 Plymouth Road, Ann Arbor, Michigan 48105.



PARKE-DAVIS

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"Equal Opportunity in Action"

**Head, Department of Veterinary Pathobiology
College of Veterinary Medicine
University of Illinois at Urbana-Champaign.**

The position is available November 1, 1989 or until filled. Qualifications include DVM or equivalent degree, and/or PhD in a biological area. Organizational and administrative experience is required. A record of demonstrated fiscal responsibility, personnel management, and leadership is desirable. Applicants should have sufficient accomplishments to make them eligible for academic appointment as a full professor and for membership on the Graduate Faculty of the University.

The incumbent will be responsible for the execution of departmental, College, and University policies and shall provide direction for departmental activities (research, professional and graduate teaching, and services). The department is organized in four divisions: microbiology-immunology, parasitology, pathology, epidemiology and public health. It maintains close liaison with the Diagnostic Laboratory and carries out diagnostic responsibilities.

The head is responsible for maintaining high standards of scholarship in the department and will initiate and supervise the departmental recruiting, promotion, and tenure activities. He/She will prepare departmental budgets and be responsible for distribution and expenditure of departmental funds and for care of space and property assigned to the department.

The salary is negotiable. The closing date is September 15, 1989. In order to ensure full consideration, applicants should submit resume and the names and addresses of three referees to:

**Dr. Gary Jackson
Chairman, Search Advisory Committee
Office of the Dean
College of Veterinary Medicine
University of Illinois
2001 South Lincoln Ave.
Urbana, Illinois 61801
Telephone: (217) 333-2760**

THE UNIVERSITY OF ILLINOIS IS AN AFFIRMATIVE ACTION/
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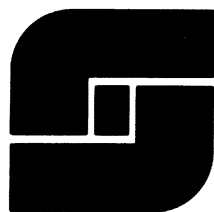
**DIRECTOR, CENTER FOR AGING AND
THE DIVISION OF GERONTOLOGY AND
GERIATRIC MEDICINE
University of Alabama at Birmingham**

The Director is expected to be a scholar, scientist, physician and administrator with outstanding competence and wide scholarly recognition. He/she is charged with managing the resources of the Center for Aging for the particular purposes of research, service, teaching, and patient care. The Center Director reports to two Vice Presidents, one for Health Affairs and one for Academic Affairs, to assure coordination of academic programs in Geriatrics and Gerontology across the UAB.

The Director will qualify to be appointed as Director of the Division of Gerontology and Geriatric Medicine in the Department of Medicine. A significant proportion of his/her responsibilities will be to lead the clinical, research, and teaching activities associated with this Division. The greater part of his/her responsibilities, however, will be directed toward Center goals which are expected to be multidisciplinary in nature and University-wide in their involvement. The Director is responsible for the quality of all aspects of the UAB's Center for Aging and is expected to establish standards for performance for the Center through active leadership. Appropriate associate directors will be appointed, so that all aspects of Center involvement can be pursued actively.

The Center for Aging at the University of Alabama at Birmingham is involved with all aspects of University operations. Major long-term goals are for the Center to be outstanding among national peers and for UAB to be recognized as outstanding in the fields of Gerontology and Geriatrics. The Center is expected to have primarily a research orientation which is interdisciplinary and includes basic and applied research activities in biomedical and social/behavioral areas.

Closing date for applications is September 15, 1989. Address responses to David G. Warnock, M.D., Chairman, Search Committee, N.R.T.C., UAB Station, Birmingham, Alabama 35294. The University is an Equal Opportunity/Affirmative Action Employer.



**PHARMACOLOGIST
(Chemical Disposition)**

Southern Research Institute is seeking candidates for a position in an ongoing research program on drug disposition and pharmacokinetics.

The successful candidate should have a doctoral degree in pharmacology, biochemistry, or other appropriate field. Requirements include a good understanding of the biological and chemical mechanisms that govern absorption, distribution, metabolism, and excretion of drugs; good analytical techniques in the analysis of biological fluids; and effective written and oral communication skills. Post-doctoral experience is not required.

A primary responsibility of this position is to evaluate the relationship between chemical structure and the physiological mechanisms that determine pharmacokinetic parameters in animals. The opportunity is available to develop and execute new research programs, especially in collaboration with scientists in other groups.

With a staff numbering approximately 650, Southern Research offers a stimulating work environment, generous benefits, modern research facilities, and an extensive technical library.

Qualified candidates should send their curriculum vitae to Tracy E. Higgins, Human Resources, Dept. 415, SOUTHERN RESEARCH INSTITUTE, P.O. Box 55305, Birmingham, AL 35255.

An Affirmative Action/Equal Opportunity Employer.

**Senior Environmental
Scientists**

ENSR Consulting and Engineering (formerly ERT) is a nationwide firm specializing in solving and preventing a broad range of environmental problems for industry.

Currently we have excellent opportunities for individuals to participate in and manage risk assessment projects including ecological and human health risk assessments, endangerment assessments, and environmental assessments. Responsibilities extend to the performance of human and environmental toxicity evaluations, dose response evaluations, and ecological modeling. Additionally, you will be involved in developing and marketing new risk assessment business.

These positions require individuals with Ph.D's or equivalent in Ecology, Toxicology, or a Biological Science plus two to five years of risk assessment experience.

Current positions are located in Acton, MA., Houston, TX., Westmont, IL., and Alameda, CA. If interested, please send your resume to Scott Taintor, ENSR Consulting and Engineering, Dept. 121, 35 Nagog Park, Acton, MA 01720. An Equal Opportunity Employer.



RESEARCH OPPORTUNITY

THE JACKSON LABORATORY, located on the coast of Maine on the fringe of Acadia National Park, is a world renowned center and resource for mammalian biology and genetics.

Professional position is available in a program project funded under the Genome Initiative. This project offers a research opportunity involving literature searching and analysis of data to be incorporated into computer graphics tools for mammalian genetic data. Applicant must be versed in classical and molecular genetics.

MS degree in Life Sciences or BS with extensive experience required.

Please contact:



The Jackson Laboratory

Attn: Harold R. Wheeler
Employment Manager
600 Main Street
Bar Harbor, ME 04609
207/288-3371

EOE/Affirmative Action Employer

MOLECULAR BIOLOGIST

Insect Virology Research Projects

The Agricultural Research Division of American Cyanamid Company has an international reputation for discovering ways to increase worldwide crop and livestock production. This is evidenced by 17 new products in just 4 years.

We currently seek a candidate with a PhD, preferably with post-doctoral experience in Virology, Molecular Biology or Biochemistry, to assist with challenging research projects involving the discovery and development of a new generation of safe insecticides. Knowledge of insect tissue cultures and viral expression systems is desirable.

American Cyanamid offers an excellent compensation and benefits package which includes 401(k) plan and flex-time. Our recently expanded state-of-the-art facilities are ideally located near Princeton, one hour from New York City and Philadelphia. For prompt and confidential consideration, forward your resume to the Employment Office, American Cyanamid Company, Agricultural Research Division, P.O. Box 400, Princeton, NJ 08540.

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YOUR FUTURE...

In the world of biotechnology, we have a history. A history with a proven track record of growth and stability.

Today, you can find us at the forefront of electroporation and novel DNA electrophoresis technology, and at the leading edge of bio-molecular separations with new chromatography supports, instruments, and systems, with the mission of meeting the future needs of biotechnologists.

This provides the following interesting and challenging opportunities for you:

MOLECULAR BIOLOGIST

An opportunity for an outgoing and creative researcher with at least two years of academic or industrial experience after Ph.D.

and strengths in mammalian cell culture and transformation, gene mapping and electroporation. This key contributor will work with an experienced multidisciplinary team to provide the next generation of tools for molecular biology. Dept. 186/170.

BIOCHEMIST/ CHROMATOGRAPHER

An opportunity for a chromatographer with well developed skills in biochemistry and organic synthesis who will modify state-of-the-art chromatographic supports and systems for the separation of proteins, peptides and nucleic acids. Dept. 180/294.

POLYMER SCIENTIST

An opportunity for a Ph.D., or equivalent, scientist skilled in the synthesis, derivation, and modification of polymers who will work from interesting new concepts to create novel chromatography products. Protein purification and chromatography experience is desirable but not essential. Dept. 180/453.

SENIOR RESEARCH SCIENTIST

An opportunity for a Ph.D., or equivalent, researcher strong in chromatography and organic synthesis who will synthesize, derivatize and develop applications of silica supports for HPLC separations of biomolecules. Dept. 180/293.

GROUP LEADER, HPLC

An opportunity for an expert, Ph.D. level chromatographer with excellent leadership skills, who will guide and conduct the development of new chromatographic supports, envelopes, systems and applications for biotechnology. Dept. 180/293.

If being part of our team sounds interesting to you, apply today by sending your resume, indicating appropriate department to: **Bio-Rad Laboratories, Human Resources-SC 8-11, 1000 Alfred Nobel Drive, Hercules, CA 94547.** EOE M/F

BIO-RAD
Laboratories

POSITIONS OPEN

FACULTY POSITION—biophysical chemistry. A tenure-track position at the level of assistant professor is available 1 January 1990 for an outstanding scientist with a Ph.D. in chemistry or biophysics and appropriate postdoctoral experience. The successful applicant will be expected to develop a strong, independent, externally-funded research program combining NMR spectroscopy and computer simulation to study the molecular dynamics of macromolecules. The candidate will also participate in departmental teaching and assume supervision of an instructional computing laboratory. Applicants should submit curriculum vitae, a summary of research interests, and arrange to have three letters of recommendation sent to: **Dr. Robert L. Geahlen, Chair, Faculty Search Committee, Department of Medicinal Chemistry and Pharmacognosy, School of Pharmacy and Pharmaceutical Sciences, Purdue University, West Lafayette, IN 47907.** Deadline for receipt of applications is 1 October 1989. *Purdue is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITIONS IN NEUROBIOLOGY

The Department of Cell Biology and Anatomy of The University of Texas Southwestern Medical Center at Dallas seeks applications for tenure-track positions at the level of assistant, associate, or full professor. Applicants must have a relevant Ph.D. or M.D. degree, and appropriate postdoctoral training, and show evidence of firm commitment to a career in independent research. We are particularly interested in considering individuals who wish to apply the techniques of biophysics, electrophysiology, biochemistry, or molecular biology to fundamental problems in cellular neurobiology. Responsibilities will also include teaching of medical and graduate students after the first year of employment. Send curriculum vitae, a brief description of proposed research, and three letters of reference to: **A. J. Hudspeth, Ph.D., M.D., Chairman, Department of Cell Biology and Anatomy, 5323 Harry Hines Boulevard, Dallas, TX 75235-9039.** *An Equal Opportunity/Affirmative Action Employer.*

FOOD SCIENTIST—Ph.D. in food science and nutrition. Research experience required with gas chromatography, high-performance liquid chromatography, mass spectrometry, infrared and atomic absorption spectrometry, and electrophoresis. Background in food product analyses, food sanitation and protection, carbohydrate and lipid chemistry, protein and enzyme biochemistry, nutrition and statistical data analysis. Design/conduct basic research on flavor chemistry, food and beverage processing and packaging with special emphasis on citrus products and by-products. Optimize separations, identify and quantify constituents. Conduct analyses of key nutrients using AOAC and related methods. Analyze and interpret experimental data using kinetic and statistical models, prepare technical reports with management recommendations. \$38,000 per year. Job location: Plymouth, Florida. Qualified applicant should submit detailed résumé to: **Job Service of Florida, 3421 Lawton Road, Orlando, FL 32803-2999.** JO# FL0141010.

MOLECULAR BIOLOGIST

A position is available immediately for a person, preferably with a Ph.D. degree, with molecular biology background. Research project includes the demonstration of the role of cytokines (IL-1, IL-6, TNF, IFN- γ) in human endometrial physiology and function, as well as the relation to the effect of sex-steroid hormones. Send curriculum vitae to: **Dr. S. Tabibzadeh, Department of Pathology, Mount Sinai Services, Elmhurst Hospital Center, 79-01 Broadway, Elmhurst, NY 11373, or call: 718-830-1685.** *An Equal Opportunity Employer.*

Tenure-track faculty position for a **MOLECULAR GENETICIST** in a university-based research institute. Candidate with interest in neuropsychiatric illnesses desired. Contact: **John Nurnberger, Jr., M.D., Ph.D., Institute of Psychiatric Research, Indiana University Medical Center, 791 Union Drive, Indianapolis, IN 46202-4887.** *Indiana University is an Equal Opportunity/Affirmative Action Employer and Contractor, M/F.*

POSITIONS OPEN

MICROSCOPIST

Winterthur Museum has an opening for a microscopist. Responsibilities include identifying wood, paper, textiles, and related organic and inorganic materials from objects of antiquity utilizing light microscopy as well as teach appropriate materials when required by the graduate program jointly sponsored by the museum and the University of Delaware. Candidates will be considered with a B.S. in the biological sciences or equivalent work experience; M.S. preferred. Experience in fluorescence microscopy is also desired. Send résumé stating salary history to: **Human Resources Division, Winterthur Museum, Winterthur, DE 19735.** *Equal Opportunity Employer.*

MOLECULAR BIOLOGIST/NEUROCHEMIST. Two postdoctoral/research associate positions are available to investigate (i) oxidative stress in primary cell culture of neurons and astrocytes of transgenic mice overexpressing human superoxide dismutase, and (ii) neurochemical mechanisms underlying membrane injury in cerebral ischemia. Candidates should have Ph.D. and experience in either biochemistry/molecular biology techniques (e.g., cDNA cloning, Western blot, etc.) or phospholipid and fatty acid analysis using HPLC techniques. Salary commensurate with experience. Send curriculum vitae to: **Dr. Pak H. Chan, Departments of Neurology and Neurosurgery, Box 0114, University of California, School of Medicine, San Francisco, CA 94143.** *An Equal Opportunity/Affirmative Action Employer.*

MOLECULAR BIOLOGY/GENETICS

If you have an educational background and experience in electrophoretic technologies, we have exciting opportunities for you in our Electrophoresis Technology Group.

PRODUCT MARKETING MANAGER

Primary marketing responsibility for product marketing, promotion, technical support, and overall product line management. Ph.D.-level biological or biochemical scientist preferred. Three to 5 years of experience in marketing life science products.

APPLICATIONS CHEMIST

Develop applications and provide support to Beckman's electrophoresis customers. B.S. or B.A. in biological science preferred, equivalent in experience acceptable. Must have practical experience of electrophoresis technologies.

Please send your résumé including salary history and requirements in complete confidence to: **Professional Employment, MS D-30-A, Beckman Instruments, Inc., 2500 North Harbor Boulevard, Fullerton, CA 92634-3100.** Principals only please. *An Equal Opportunity Employer.*

BECKMAN

NMR RESEARCH FACILITY DEPARTMENT OF RADIOLOGY UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER (UTHSCSA)

An immediate opening is available for a qualified individual with experience and specialization in magnetic resonance imaging. The successful candidate will have the capability to operate and develop diverse experimental imaging and localized spectroscopic protocols on a General Electric 2T/45 chemical shift imager using a variety of animal models. Experience with coil-building technology is desirable but not essential.

The NMR Research Facility at the UTHSCSA is experiencing significant growth with the construction of a new building to house the Research Imaging Center to be completed in early 1991. The successful candidate will be involved in the development of these new facilities. The level of the position and salary is negotiable depending upon experience and qualifications. Application must be received before 15 September 1989 and should include a current curriculum vitae with the names of three professional references. Forward application materials to:

**Office of Human Resources
The University of Texas Health Science Center
at San Antonio
7703 Floyd Curl Drive
San Antonio, TX 78284-7972**
Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

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

NEUROBIOLOGIST. Tenure-track position at assistant or associate professor level available immediately in the Department of Anatomy and Neurobiology. Candidates with research interests in neuroendocrinology of reproduction using modern cellular and molecular technology preferred; however, research interests in neurobiology of development, regeneration, neuroimmunomodulation, or aging will also be considered. Excellent opportunities for collaborative research with faculty in Centers on Aging and Cancer. Ph.D. and 2 to 3 years of postdoctoral research training required. Establishment of an independent, productive, extramurally funded research program is expected. Ability to team-teach anatomy courses, with preference given to gross anatomy, and participation in the graduate program is essential. Send curriculum vitae, description of research accomplishments, summary of research plan, teaching experience, and three letters of recommendation by 1 November 1989 to: **M. B. Nikitovitch-Winer, Chair, Department of Anatomy and Neurobiology, University of Kentucky Medical Center, Lexington, KY 40536-0084.**

NEUROBIOLOGY/CELL BIOLOGY

ASSISTANT PROFESSOR, tenure-track position at Kenyon College. Candidates should have a Ph.D. degree, evidence of excellence in teaching, and an active research program that will involve undergraduates. Teaching will be in the areas of neurobiology, cell physiology, and in introductory biology. A research laboratory and start-up costs will be provided. Applicants should submit curriculum vitae, graduate and undergraduate transcripts, a description of teaching and research interests, and should arrange to have three letters of reference sent by 1 December 1989 to: **Dr. Thomas C. Jegla, Department of Biology, Kenyon College, Gambier, OH 43022.**

An Equal Opportunity Employer.

PHARMACOLOGIST, ASSISTANT/ASSOCIATE PROFESSOR. A full-time, tenure-track position is available for a basic scientist with an earned doctorate in pharmacology to develop and direct a pharmacology course for sophomore medical students. Development of a research program is expected. One to two years of postdoctoral experience is desirable. Applicants should send curriculum vitae and names/addresses/telephone numbers of three references to: **B. H. Ragatz, Ph.D., Chair, Search Committee, Fort Wayne Center for Medical Education, Indiana University School of Medicine, 2101 Coliseum Boulevard East, Fort Wayne, IN 46805.** *Indiana University is an Equal Opportunity/Affirmative Action Educator, Employer, and Contractor, M/F.*

POSTDOCTORAL FELLOW—Mechanisms of carcinogenesis by asbestos. Current studies focus on growth substances and mutagenesis. Position currently available. Send curriculum vitae to: **John E. Craighead, Chairman, Department of Pathology, University of Vermont, Burlington, VT 05405.**

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIP available immediately for an individual with a background in molecular and cell biology. Projects involve the use of genetically engineered cell implants for (i) the purpose of gene therapy and (ii) the study of tumor cell biology. Send curriculum vitae and names of three references to: **Dr. James A. Zwiebel, Lombardi Cancer Center, Georgetown University Medical Center, 3800 Reservoir Road, NW, Washington, DC 20007.**

REGULATORY CELL BIOLOGY

CELL BIOLOGIST

This position will be responsible for investigating the postreceptor events involved in the activation of endothelial cells and leukocytes by interleukins. The incumbent will investigate the signal transduction involved in the synthesis and expression of adhesion proteins.

The successful candidate will have a Ph.D. in Biology, Biochemistry, Pharmacology or related discipline with a minimum of two years postdoctoral experience studying signal transduction.
RESPOND TO DEPT. JC-1S-CB1

SCIENTIST - ELECTROPHORESIS

Establish and maintain an electrophoresis laboratory and participate in the design and execution of experiments to decipher the signal transduction mechanisms involved in the synthesis and expression of adhesion proteins on endothelial cells and leukocytes.

Bachelor's or Master's in Cell Biology, Biochemistry, Pharmacology or related discipline with experience in all forms of electrophoresis desired.
RESPOND TO DEPT. JC-1S-CB2

SCIENTIST - CELL BIOLOGY

This position will be part of a group involved in studying the signaling mechanisms in the synthesis and expression of adhesion proteins on endothelial cells and leukocytes.

Bachelor's in Cell Biology, Biochemistry or Pharmacology with experience in using HPLC methodology to measure inositol phosphates and interleukins and other cellular mediators.

RESPOND TO DEPT. JC-1S-CB3

POSTDOCTORAL POSITION

We are seeking a recent Ph.D. in Cell Biology, Biochemistry or Pharmacology to investigate protein phosphorylation and dephosphorylation related to the activation of endothelial cells, leukocytes and the expression of adhesion proteins.
RESPOND TO DEPT. JC-1S-PDBW

BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc. is engaged in the discovery, development, manufacture and marketing of novel therapeutic agents. The expansion of our Research and Development programs and facilities has created the following positions, at various levels, to work in the drug discovery programs within our PHARMACOLOGY Department located in DANBURY, CT.

RESPIRATORY/ INFLAMMATION

PRINCIPAL SCIENTIST

This researcher will work in our multi-disciplinary drug discovery programs engaged in the study of pulmonary function and inflammation. The incumbent will develop techniques and conduct research in the measurement of pulmonary function and inflammation, develop *in-vivo* models of acute and chronic inflammation, characterize inflammatory processes using *in-vivo* assays and perform basic research aimed at the discovery of specific mechanistic approaches to designing new therapeutic agents.

The successful candidate will have a Ph.D. and a minimum of five years experience, preferably in industry, managing a group of scientists, a good publication history, strong understanding of molecular mechanisms of inflammation and expertise in pulmonary function.

RESPOND TO DEPT. JC-1S-GL1

SCIENTIST

This Scientist will assist with and conduct research in pulmonary function and inflammation.

A Bachelor's or Master's in Pharmacology or Physiology or other related discipline with interest and experience in inflammatory lung reactions required.

RESPOND TO DEPT. JC-1S-GL2

CARDIOVASCULAR

SENIOR SCIENTIST

This position will be involved with designing and conducting experiments assessing cardiovascular function and will work in a group seeking novel anti-inflammatory compounds.

The qualified candidate will have surgical expertise as well as having experience in evaluating hemodynamics and cardiac performance in large animals. A Ph.D. in Cardiovascular Physiology or Pharmacology with three or more years postdoctoral experience required.

RESPOND TO DEPT. JC-1S-RW1

SCIENTIST

This position will assist in research projects involving the study of *in-vivo* hemodynamic and cardiac parameters.

The successful candidate will have a Bachelor's or Master's in the life sciences with pharmacology research experience.

RESPOND TO DEPT. JC-1S-RW2

BOEHRINGER INGELHEIM offers a competitive salary and benefits package including relocation assistance, modern facilities and the opportunity to have your contributions recognized.

If interested, please send your curriculum vitae to the appropriate department code, BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc., 90 East Ridge, P.O. Box 368, Ridgefield, CT 06877. We are an equal opportunity employer m/f/h/v.



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MAGAININ SCIENCES INC. is a rapidly developing Pharmaceutical company. We are seeking scientists at all levels to expand our drug research and development efforts in one of our core technologies:

PEPTIDE CHEMISTRY

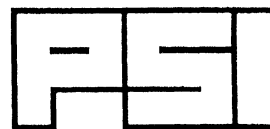
Opportunities are at the B.S., M.S., postdoctoral training and Ph.D. staff levels. Candidates should have interest in drug discovery and host defense peptides, good communication skills and training and research experience in:

- (•) structure activity studies
- (•) isolation, characterizations and synthesis of peptides.

Applicants should submit a curriculum vitae, description of research interests and salary requirements to: **Dr. W. Lee Maloy, Director of Peptide Chemistry, Magainin Sciences Inc., 550 Pinetown Road, Fort Washington, PA 19034.**

Magainin Sciences Inc. is located in new state-of-the-art facilities in suburban Philadelphia. We offer excellent salaries, benefits and the opportunity to change the future of therapeutics.

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PAUL SCHERRER INSTITUT

Physicist

A scientist is required immediately to join the Technical Physics Laboratory at Paul Scherrer Institute at Villigen, Switzerland. The appointment is for participation in development and testing of conductors for superconducting magnets as well as for the research program within the superconductor development group.


Applicants should possess a PhD degree in physics or materials science. Candidates would be expected to have a high degree of initiative and the ability to work in a team. Experience in the field of superconductivity would be advantageous.

The salary will be between Sfrs. 65'000.— and Sfrs. 70'000.— per year. The contract is for three years, but renewable. For further information, applicants are invited to contact Dr. G. Pasztor by telephone 0041-56-99 35 94. Applications quoting reference code 3413, containing curriculum vitae and references should be addressed to the

PAUL SCHERRER INSTITUTE
Würenlingen & Villigen, Personnel Division,
CH-5232 Villigen PSI, Switzerland

POST-DOCTORAL FELLOWSHIPS

Immunoassay Research

 IGEN, Inc., a dynamic and innovative leader in the field of biotechnology, continues to grow while developing new products from basic research. We currently have opportunities available for post-doctoral fellows at our Rockville, Maryland facility.

As a post-doctoral fellow with IGEN, you will participate in expanding IGEN's Electrochemiluminescent technology for Immunoassays and other bioanalytic techniques. Appointments are for a minimum of 1 year with opportunity for renewal.

IGEN, Inc. offers a challenging work environment which fosters career growth and development. Send resume to: **IGEN, Inc., 1530 East Jefferson Street, Rockville, MD 20852, Attn: Human Resources Dept.**



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Give Your Career This Diagnostic Test.

Are you developing new diagnostic technologies? Are you contributing to products that will make a major impact on healthcare? Are you encouraged to break new ground?

If your response to these questions is "No," the answer is Becton Dickinson and Company. We're a \$1.7 billion leader in supplies and diagnostic systems for the healthcare industry. Our Corporate Research Center in Research Triangle Park, North Carolina is exploring exciting new technologies that are changing the treatment of disease. We're not just another overnight success—our people have been research leaders for years.

We are seeking creative, highly motivated scientists to join a multidisciplinary team in the development of DNA probe-based diagnostics. The successful candidates will implement nucleic acid chemistry and molecular biology to design, develop and implement nucleic acid amplification technologies.

Join Becton Dickinson today. And give your career the ultimate test.

chemistry or biochemistry with at least 2-3 years of postdoctoral training in the field of DNA structure. A published record of accomplishment in this area is required.

DNA Enzymologist

This individual will be responsible for the application of novel enzyme reactions to facilitate nucleic acid amplification. This includes the novel application of enzymes for amplification, characterization of enzyme catalyzed reactions, and the modification of reaction conditions to alter enzyme activity and specificity.

We are seeking an individual with extensive training and experience in the enzymology of DNA recognizing enzymes. This includes detailed analysis of reaction mechanisms related to DNA replication and RNA transcription. The successful candidate must have a Ph.D. degree in biochemistry, chemistry or molecular biology with at least 2-3 years postdoctoral experience in the investigation of reaction mechanisms for DNA replication or RNA transcription. A published record of accomplishment in this area is required.

Biophysical Chemist

This individual will be responsible for the characterization and optimization of proprietary amplification methodologies through detailed kinetic and thermodynamic analysis of reaction parameters. This includes designing novel reaction schemes to produce amplification of target molecules, investigating amplification reactions and modifying reaction parameters to optimize the amplification reaction.

We are seeking an individual with extensive experience in the characterization of DNA structure and the dynamics of hybridization. The successful candidate must have a Ph.D. in biophysical chemistry,

Becton Dickinson offers an excellent research facility with an outstanding scientific staff dedicated to advancing diagnostics through state-of-the-art science and technology. If you are a highly motivated, creative scientist, looking for a stimulating environment in which to substantially contribute to this fast-moving area of diagnostics, then we invite your application for these positions. To apply in confidence, send your resume with salary requirements to: Human Resources Department, Becton Dickinson and Company Research Center, P.O. Box 12016, Research Triangle Park, NC 27709. AA/EEO Employer.

**BECTON
DICKINSON**

POSITIONS OPEN

PLANT BIOCHEMIST

Centro Internacional de Agricultura Tropical (CIAT), is an international agricultural research center with commodity programs in common beans, cassava, rice, and tropical pastures, with headquarters near Cali, Colombia. A scientist is being sought who has had considerable research experience in applied plant biochemistry. This senior staff position will have the following responsibilities: (i) application of techniques from molecular biology to biochemical and genetic studies of host-pathogen/pest and environmental stress interactions in order to help identify factors responsible for resistance, and (ii) development of protein and RFLP markers for germ-plasm characterization, gene tagging, pathogen/pest variability, and genome organization. A Ph.D. in plant biochemistry with research experience in a range of related discipline areas will be desirable. Salary and benefits, including annual home leave are at international standards. Living and working conditions in the Cali environment are excellent with good international schools available. Applicants should contact: **Dr. Douglas R. Laing, Deputy Director General, A.A. 6713, Cali, Colombia.** (Fax 57-3-647243, Telex: 05769 CIAT CO). Names and addresses (and fax or telex numbers if available), of three referees are required. Prospective candidates may wish to fax a brief résumé, with a full curriculum vitae to follow by mail. Applications should reach CIAT before 22 September 1989.

PLANT MOLECULAR BIOLOGIST

Sogetal Corporation, a plant biotechnology company in the San Francisco Bay Area, has a position for a recent Ph.D. available immediately in our cereal transformation group. The successful candidate should have a degree in molecular biology or a related field and experience with plant transformation systems and/or plant gene expression and vector construction. One to 2 years of postdoctoral experience desirable. Please send curriculum vitae to: **Human Resources/L2, 3876 Bay Center Place, Hayward, CA 94545.** Sogetal is an Equal Opportunity Employer.

PLANT PHYSIOLOGIST ASSISTANT/ASSOCIATE PROFESSOR AT CORNELL UNIVERSITY

The Department of Food Science and Technology in Geneva, New York, seeks a plant physiologist for a 12-month tenure-track position to start 1 January 1990. The appointee will be expected to develop a strong research program on fundamental aspects of the mechanism of post-harvest senescence with the goal of extending the shelf-life of New York's fruits and vegetables. Collaboration with New York State industry is expected. Ph.D. in plant physiology or closely related field is required. Postdoctoral experience is desirable. Salary is competitive and commensurate with qualifications. Send résumé, transcript, research statement, copies of publications and names and addresses of three references to: **Dr. G. S. Stoewsand, Chair, Search Committee, Department of Food Science and Technology, New York State Agricultural Experiment Station, Geneva, NY 14456** by 31 October 1989. Cornell is an Affirmative Action/Equal Opportunity Employer.

NEPHROLOGY RESEARCH UNIT, MAYO CLINIC AND FOUNDATION

POSTDOCTORAL FELLOWSHIP OPPORTUNITIES. Seeking qualified candidates (M.D., M.D./Ph.D., Ph.D., or D.V.M.) for postdoctoral positions in nephrology research. Background in biochemistry, molecular biology or physiology/pharmacology is desirable. Members of the Nephrology Research Unit include:

Dr. T. P. Dousa—phosphate transport, vasopressin action, and renal biochemistry
Dr. F. G. Knox—sodium and phosphate transport, renal micropuncture
Dr. R. Kumar—calcium transport and metabolism, vitamin D metabolism, vasopressin action
Dr. C. Romero—control of sodium excretion and prostaglandin metabolism in the kidney
Dr. T. R. Schwab—mechanism of action of ANF and endothelin in the kidney
Dr. S. Turner—genetics of hypertension

Interested candidates should write to: **Dr. T. P. Dousa, Head, Nephrology Research Unit, Guggenheim 9, Mayo Clinic, Rochester, MN 55905.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

Gastroenterology Division at University of Southern California (USC), seeks **POSTDOCTORAL ASSOCIATE OR INSTRUCTOR** to study cellular mechanisms of pancreatic secretion. Candidates with research experience will be given preference. Position available immediately. Salary commensurate with experience. Please send curriculum vitae to: **Mrs. Maria Vidrio, GI Section, Department of Medicine, USC School of Medicine, Los Angeles, CA 90033.**

POSTDOCTORAL ENTOMOLOGIST

Postdoctoral position available immediately to conduct laboratory and field studies on biological control, management and ecology of ash whitefly. Experience in insect population biology or biological control desirable. Send curriculum vitae, transcripts, dissertation abstract and three letters of reference by 1 September 1989 to: **Dr. T. S. Bellows, Department of Entomology, University of California, Riverside, CA 92521.**

POSTDOCTORAL—POLYMER CHEMIST CALIFORNIA INSTITUTE OF TECHNOLOGY

Postdoctoral position for Ph.D. with excellent skills in polymer/organic synthesis. Research on molecular recognition of proteins, molecular imprinting. Send curriculum vitae and three references to: **Professor F. H. Arnold, Caltech, 206-41, Pasadena, CA 91125.** FAX: 818-568-8743.

POSTDOCTORAL POSITION in plant biochemistry available November 1989 at Duke University to study biosynthetic pathways (including ethylene and branched-chain amino acid biosynthesis) in higher plants and microorganisms. Experience needed in protein chemistry, enzymology, or molecular biology. Respond with curriculum vitae, publication list, and references to: **Professor Michael Pirrung, Department of Chemistry, Duke University, Durham, NC 27706.** Duke University is an Affirmative Action/Equal Opportunity Employer.

A POSTDOCTORAL POSITION in numerical weather prediction is immediately available at the Supercomputer Computations Research Institute (SCRI) at the Florida State University in Tallahassee, Florida. This position is part of a 3-year funded NSF grant for work in applying four-dimensional data assimilation studies using adjoint techniques to an operational spectral model. The candidate should have completed a Ph.D. in atmospheric sciences, applied mathematics, computer science, or other relevant disciplines. Some experience in FORTRAN programming on vector computers is desirable. Salary range is \$29,000 to \$31,200 per annum. Interested persons should send curriculum vitae and the names and addresses of three references to: **Professor I. M. Navon, SCRI, Florida State University, Tallahassee, FL 32306-4052.** Telephone: 904-644-6560. Florida State University is an Equal Opportunity/Affirmative Action Employer (M/F).

POSTDOCTORAL POSITION. Available 1 September 1989 to study molecular structure of plant polyesters. Requires Ph.D. in plant biochemistry or allied field, with experience in one or more of the following areas: biosynthesis, biodegradation, and isolation of cuticular materials; modern analytical methods (HPLC, GC-MS); modern spectroscopy (NMR in solution and solid state, FT-IR). Send résumé and two letters of reference to: **Dr. Ruth E. Stark, Department of Chemistry, City University of New York, The College of Staten Island, 50 Bay Street, Staten Island, NY 10301.** Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION—INSULIN ACTION to participate in an ongoing research program aimed at elucidating the mechanism(s) of signaling from the insulin receptor to the glucose transporter and other proteins involved in cellular responses. A current emphasis is the cloning and characterization of proteins phosphorylated on tyrosine in vivo by the insulin receptor. Some experience in recombinant DNA methodologies is desirable. Please send curriculum vitae and names and telephone numbers of references to: **Professor Gustav E. Lienhard, Department of Biochemistry, Dartmouth Medical School, Hanover, NH 03756.**

POSITIONS OPEN

POSTDOCTORAL POSITION: available now to investigate insulin and growth factor action. Cell culture (liver, adipocyte, lymphocyte), molecular biology and immunochemical approaches are employed. Focus on receptor internalization, turnover, and tyrosine kinase function. Strong biochemical background is mandatory. Experience with molecular biological methods is preferred.

In accordance with Canadian immigration requirements, priority is given to Canadian citizens and permanent residents of Canada.

Send résumé, the names of three references, and a letter stating research interests to:

**Dr. Barry I. Posner, Director
Polypeptide Hormone Laboratory
Strathcona Medical Building, Room 211
3640 University Street
McGill University
Montreal, Quebec, H3A 2B2, Canada**

A POSTDOCTORAL POSITION is immediately available to study the molecular biology of thyroid hormone regulation of genes encoding mammalian Na, K-ATPase. Experience in molecular biology is required. Salary commensurate with qualifications. Send curriculum vitae and the names of three references to: **Dr. Gregory Gick, Department of Biochemistry, SUNY Health Science Center at Brooklyn, 450 Clarkson Avenue, Box 8, Brooklyn, NY 11203.** Equal Opportunity/Affirmative Action Employer. DM #C0288.

POSTDOCTORAL POSITION available immediately in a laboratory investigating the biochemistry of fibrinolysis. Experience with protein purification and enzymology essential. Applicants with Ph.D. in biochemistry send curriculum vitae and names of three references to: **Dr. Victor Gurewich, Vascular Laboratory, Department of Biomedical Research, St. Elizabeth's Hospital, 736 Cambridge Street, Boston, MA 02135.**

POSTDOCTORAL POSITION. To study cellular and molecular biology of ethanol dependence in model cell culture systems and cells from alcoholics. Send curriculum vitae and three letters of reference to: **Dr. Ivan Diamond or Dr. Adrienne Gordon, University of California, Department of Neurology/Gallo Center, Building 1, Room 101, San Francisco General Hospital, San Francisco, CA 94110.**

POSTDOCTORAL POSITION in molecular genetics available fall 1989 in the Biology Division of the Oak Ridge National Laboratory. Project involves the development and studies of transgenic mouse models of human sickle cell anemia. Background in genetics and molecular biology desirable.

Applicants should have curriculum vitae, a brief statement of research interests, and three letters of reference sent to: **Dr. Raymond A. Popp, The University of Tennessee—Oak Ridge Graduate School of Biomedical Sciences, P.O. Box 2009, Oak Ridge, TN 37831-8077.** UTK is an Equal Employment Opportunity/Title IX Section 504 Employer.

POSTDOCTORAL POSITION: Available immediately to study the molecular biology and genetics of the AIDS pathogen, *Pneumocystis carinii*. Ongoing projects include analyses of chromosome structure, the rRNA genes and transcripts, and nuclear Group I introns. Molecular biology and genetics experience required. Send curriculum vitae and three letters of reference to: **Dr. Gregory Buck, Box 678 MCV Station, Medical College of Virginia Campus, Virginia Commonwealth University, Richmond, VA 23298.**

POSTDOCTORAL POSITIONS available to study (i) molecular basis for oncogenic transformation of T-lymphocytes by herpesvirus saimiri and (ii) use of herpesviruses as vectors for gene therapy. Excellent research environment at a division of Harvard Medical School situated in a rural setting 25 miles west of Boston.

Please send curriculum vitae, publications, and three references to:

**Dr. Ronald Desrosiers
New England Regional Primate Research Center
Harvard Medical School
1 Pine Hill Drive
Southboro, MA 01772**

RESEARCH ASSOCIATE CELL BIOLOGY

Amgen is a dynamic and growing organization producing products for human health care through applied biotechnology. Our continued growth and development has created an immediate opportunity for a highly motivated Research Associate to work in the area of serum-free medium development.

Candidates must have a BS/BA in the biological sciences. Experience in Cell Culture is desirable, but we will train an enthusiastic individual with strong interest and initiative who has the ability to work independently.

Amgen offers a stimulating and challenging research environment as well as an excellent compensation and benefits package. Our location, about an hour northwest of Los Angeles, offers the best in Southern California living.

Interested candidates with the required background should send a resume, including references, in confidence, to:

AMGEN, INC.
Recruitment, Dept. #415
1900 Oak Terrace Lane
Thousand Oaks
CA 91320

Equal
Opportunity
Employer

AMGEN

Molecular Biologist

Somatix Corporation is seeking a molecular biologist for a position as staff scientist. The individual selected will be involved in the development of retrovirus vectors optimized for expression in a variety of cell types. The successful candidate will have a Ph.D. with 1 to 3 years of postdoctoral or industrial experience. Research experience should include design of new vectors, cell culture and high level expression in mammalian cells.

Cell Biologist

The successful candidate will be expected to contribute to the development of somatic-cell based delivery systems. Candidate should possess a Ph.D. and have extensive experience in cell biology, biomatrix materials or angiogenesis. Experience in artificial organs and cell implantation systems also desirable.

We offer a competitive salary and benefits package including stock options. **Somatix** combines a stimulating research environment with the opportunities found in a start-up company. **Somatix** provides excellent career potential for its employees. Qualified individuals should apply to: **Somatix Corporation.**

Somatix

One Kendall Square • Building 650 • Cambridge, MA 02139

Scientists

- Molecular Biologists
- Immunologist
- Cellular Immunologist

XOMA is expanding its research activities into targeted therapeutics in autoimmunity and has immediate openings for four scientists. Candidates must have a demonstrated ability to work independently and possess excellent interpersonal & communication skills.

Protein Chemistry

The successful candidate will be responsible for examining the molecular biology of a variety of plant, bacterial & viral proteins for possible use in immunotoxin construction. Studies include cloning and expression of toxins, determination of structure-function relationships, and evaluation of recombinant constructs.

Requires a Ph.D. in Molecular Biology, Biochemistry or related field with expertise in recombinant DNA techniques, the polymerase chain reaction, and the cultivation of microorganisms. Experience in protein purification & characterization preferred.

Molecular Genetics

Responsibilities include the performance of both basic and applied research regarding antibody chimerization/humanization, as well as recombinant approaches to antibody/immunotoxin structure/function. Will perform studies to isolate immunoglobulin H and L chain mRNAs, prepare cDNAs, sequence CDR re-

gions, mutagenize human recipient immunoglobulin genes & evaluate expression systems.

Requires a Ph.D. in Molecular Biology, Molecular Genetics, Biochemistry, Biophysics or Biology with 2+ years postdoctoral experience in Molecular Genetics. Experience in molecular biology of immunoglobulins preferred.

Immunology (2 positions)

In the first position, candidates should have an M.D. or Ph.D. and two to three years postdoctoral training in autoimmunity or closely related areas. Candidates should also have experience with *in vivo* models and will participate in the evaluation of the therapeutic value of new methodologies through *in vitro* and *in vivo* studies.

In the second position, candidates should have a Ph.D. in Immunology, Molecular Biology or a related field and two to three years postdoctoral training in the area of the molecular immunology of human lymphoid cell activation & differentiation antigens.



XOMA
CORPORATION

XOMA offers competitive salary and comprehensive benefits in an outstanding work environment. For consideration, please forward your C.V. and salary history to: Technical Recruiting Coordinator, XOMA Corporation, 2910 Seventh Street, Berkeley, CA 94710. EOE.



The University of
Sydney, Australia

LECTURESHIP

School of Biological Sciences

Reference 27/01

Applicants are sought for a Lecturer in Plant Biology, particularly in the areas of taxonomy and evolution of vascular plants. The successful applicant will be expected to contribute to undergraduate and postgraduate teaching in one or more of the following fields: plant taxonomy, biogeography and evolution and variation of the Australian flora.

Facilities available include the John Ray Herbarium, glasshouses, growth cabinets, four-wheel drive vehicles and molecular biology laboratories. Staff within the School are working in ecology, biology of Australian flora and plant molecular biology.

Successful applicants should possess a PhD degree or equivalent research experience and have an established research record. Appointments to lectureships have the potential to lead to tenure and are usually probationary for three years.

Further information from Professor D T Anderson (02) 692 2848, or Professor N A Walker (02) 692 2385.

Closing: 25 August, 1989.

Salary: Lecturer \$A31,259-\$A40,622 per annum.

Method of application: Applications, quoting Ref. no. and including curriculum vitae, list of publications and the names, addresses and FAX nos. of three referees, to the Registrar, Staff Office, University of Sydney, NSW 2006 Australia from whom further information is available, FAX +612 692 4316.

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

Equal employment opportunity is University policy.

SCIENTISTS

IIT Research Institute, a not-for-profit research and development organization has positions available for individuals qualified in one of the following:

MICROBIOLOGIST

The candidate must have a Ph.D. degree in microbiology and/or immunology and 0-3 years of experience. You will join a team of investigators studying pathophysiological and immunologic responses in experimental animals. Responsibilities will include participation in ongoing research grants and contracts; preparation of research proposals, reports and publications; and supervision of junior technical staff.

RESEARCH BIOCHEMIST/ PHARMACOLOGIST

Candidate must have a Ph.D. with 0-3 years of postdoctoral training. Will provide analytical support for studies in toxicology, carcinogenesis, and cancer chemoprevention. Hands-on experience in one or more of the following areas is desirable: eicosanoid analysis; lipid biochemistry; drug metabolism; pharmacokinetics and/or cell culture. The chosen candidate will have opportunity to develop an independent research program.

Both positions require U.S. citizenship or permanent U.S. residency. Salaries are commensurate with qualifications and level of experience. Please submit resume, including salary history, and position of preference to: **L. Amft, Senior Personnel Representative, Dept. LA/S1, IIT Research Institute, 10 West 35th Street, Chicago, IL 60616.** Equal Opportunity/Affirmative Action Employer M/F/V/H.



ABBOTT LABORATORIES

Abbott Laboratories' Pharmaceutical Products Division is a leader in the development and manufacture of anti-infective, cardiovascular and anti-convulsant/neurological products. Supported by a significant investment to R&D, twice the industry standard, we maintain a variety of specialized labs featuring state-of-the-art developmental technologies. Our extensive technical resources create a superior environment for those who would like to make a significant personal and professional commitment.

ELECTROPHYSIOLOGY TECHNICIAN

A number of exciting projects are currently underway in our Neuroscience Group. A motivated individual is needed to carry out electrophysiological experiments under the direction of a senior neurophysiologist. Project responsibility may include extracellular, intracellular and/or patch-clamp recordings from neurons or other excitable cells *in-vitro*. Tissue preparation and computer-assisted data analysis will be necessary. A B.S. or equivalent degree with experience in electrophysiology is required. An M.S. degree is desirable.

Abbott Laboratories offers each employee an environment in which to build a distinguished career, and provides competitive compensation and benefits including a profit sharing and stock retirement plan. We are located in an attractive suburban area approximately 30 miles north of Chicago. If you believe that you can benefit from a long-term association with Abbott, and your credentials meet the indicated requirements, please send your resume with salary history to: **Patricia Handy, Corporate Placement, Job #7550, Abbott Laboratories, 1 Abbott Park Rd., Abbott Park, IL 60064.** (To facilitate handling of your resume, please indicate Job # on your cover letter or resume.) Abbott is an Affirmative Action Employer.

ABBOTT LABORATORIES



Quality
Health Care
Worldwide
1888-1989

The Program on Conscious and Unconscious Mental Processes of the John D. and Catherine T. MacArthur Foundation seeks a **cognitive scientist** as a visiting academic for a two year "sabbatical plus leave" at the University of California, San Francisco.

Who: An associate or full professor in a university department is asked to join this program for two years of collaborative research on cognitive science. A background in perceptual processing, cognitive processing, control of memories, schematic structures of meaning, or information processing under stress is desirable.

What: The focus will be on unconscious processing and control of conscious representations of perhaps conflict-laden and highly emotional themes. Since this program involves intensive study of small numbers of persons with selected clinical problems, the scientist could conduct research on patient populations.

Where: Collaborative research will be conducted at the Open Door Research Center of the Program on Conscious and Unconscious Mental Processes, directed by Professor Mardi Horowitz, at the University of California, San Francisco.

How: During the first year the program will provide the difference between sabbatical salary and home base full salary. The second year will provide full salary while the person is on leave of absence from his or her home university.

When: Apply before December 1, 1989.

The University of California is an equal opportunity/affirmative action employer. Women and minorities are encouraged to apply.

For more details, write or fax to:

Program on Conscious and Unconscious Mental Processes
University of California, San Francisco
Langley Porter Psychiatric Institute
1144 Irving Street
San Francisco, CA 94122
FAX (415) 476-7861



The Biogen story starts with our strategic focus on the development of human therapeutics. Advanced genetic engineering techniques and a rational approach to drug design have led to breakthroughs in the AIDS, inflammation and selected cancer markets. Among our latest developments is Receptin™, our AIDS therapy in human clinical trials. And our West German affiliate is marketing gamma interferon for the treatment of rheumatoid arthritis. Clearly, Biogen is making the progress necessary to meet its goal of becoming a fully-integrated pharmaceutical company.

Virologist

A virologist with interest in pathogenic mechanisms and antiviral therapeutic intervention is sought for this newly created position. The initial focus will be on HIV infections, examining parameters of viral replication and host response. A background in virology is necessary, as well as an interest in working with HIV. It is also desirable to have several years of post-doctoral training and supervisory capability.

The outstanding Biogen benefits package includes fully-paid life, medical, dental and disability insurance. A 401K savings plan with company-matching provision along with company-paid pension. 100 percent tuition reimbursement for as many as 4 courses a year. And 10 weeks' paid maternity leave. Plus a lot of little things that really add up — like our credit union, on-site aerobics and relocation assistance.

To apply for this immediate opening, send your resume to Biogen, Inc., Ref. SV811, 14 Cambridge Center, Cambridge, MA 02142. Biogen is an Equal Opportunity Employer.

BIOGEN

BIOTECHNOLOGY

ASSOCIATE SCIENTIST OR RESEARCH ASSOCIATE CELL BIOLOGY

At Cetus Corporation, we are committed to maintaining our leading role in the research and development of biotechnology-based products.

We are currently seeking an experienced Associate Scientist or Research Associate to conduct experiments on the characterization, production and cloning of factors produced by the immune system. You will develop biological assays and perform biochemical studies to characterize function, receptors, mechanism of action, and supervise staff.

To qualify for this position, you must have a Ph.D or Master's degree in Immunology/Cell Biology or related areas, with hands-on experience in immunology, biochemistry and cell biology, and a minimum of 5 years' related experience. Good oral and written communication skills are essential.

Cetus offers competitive salaries and excellent benefits.

For immediate and confidential consideration, please send your C.V. including publications and references to: Cetus Corporation, Box AC, 1400 Fifty-Third Street, Emeryville, CA 94608. We are an Equal Opportunity Employer.



Physiologists/Pharmacologists, Cell Biologists, Protein Chemists

Ph.D., M.S. or B.S. levels

The Protein Chemistry/Cell Biology Department of the Medical Research Division and the Medical Device Research Division of American Cyanamid are seeking several Scientists who are interested in working in a highly integrated, competitive research environment comprised of Molecular Biologists, Protein Chemists, Cell Biologists and Physiologists.

These positions will focus on research exploring the biology of tissue repair. Emphasis will be put on the structures and functions of relevant biomolecules for the purposes of better understanding the molecular and cellular mechanisms of tissue repair processes and for identifying new drug targets.

We are seeking candidates for the following positions:

Senior Physiologist/Pharmacologist, Ph.D., with 3-5 years of industrial or academic experience in developing pharmaceutical agents or investigating the physiology of biological agents, and demonstrated ability to independently manage a focused research effort. Experience in developing suitable animal models, and in small and large animal surgery techniques are prerequisites, as are excellent oral and written communications skills. Prior experience in the field of wound management is desirable.

Senior Cell Biologist, Ph.D., with 3-5 years' postdoctoral experience, broad expertise in cell biological techniques, a relevant scientific background and strong interest to contribute to an interdisciplinary approach to tissue repair research.

Protein Chemist, M.S. or B.S., with excellent working knowledge in a variety of major protein chemistry techniques. Experience with peptide synthesis or immunological methods is desirable.

Physiologist/Pharmacologist, M.S. or B.S., with excellent skills in animal handling and surgery. A strong interest in animal model development for studying the effects of various agents in wound healing is desirable.

We offer an excellent salary, comprehensive benefits including a 401K savings plan, and a highly professional environment in Rockland County, just 25 miles north of New York City. If you are interested in pursuing research with a major pharmaceutical company dedicated to it, send your resume and the names of three references to: Professional Employment Representative, Medical Research Division, Lederle Laboratories, a division of American Cyanamid Company, Middletown Road, Pearl River, NY 10965. We are an equal opportunity employer.



POSITIONS OPEN

POSTDOCTORAL POSITION DEPARTMENT OF RADIATION THERAPY THE UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON

A postdoctoral position is available immediately to study genetic alterations involved in murine mammary cancer development. Applicants should have a strong background in molecular biology. Send curriculum vitae and three references to: **Dr. R. L. Ullrich, Department of Radiation Therapy, 3.310 Gail Borden, F56, The University of Texas Medical Branch, Galveston, TX 77550.** The University of Texas Medical Branch is an Equal Opportunity/Affirmative Action Employer. UTMB hires only those individuals authorized to work in the United States.

POSTDOCTORAL POSITION IN ECOLOGY available January 1990. Teach mammalogy and ecology and assist in research on food caching behavior of kangaroo rats. Send letter of application, curriculum vitae, transcripts, and three letters of reference to: **Dr. Stephen Jenkins, Department of Biology, University of Nevada, Reno, NV 89557,** or call: 702-784-6188 for more information. Application deadline: 15 September 1989. UNR is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION NEUROBIOLOGY

Available immediately for a maximum of 3 years. Histochemical, computer imaging and in vitro electrophysiological techniques are used to study structure and function of dopamine-containing neurons in rodents, primates and humans. Send résumé and names of three references to: **Dr. D. German, Department of Physiology, University of Texas Southwestern Medical Center, Dallas, TX 75235.** An Equal Opportunity Employer.

The Department of Cell Biology, University of Texas M.D. Anderson Cancer Center is recruiting qualified individuals for **POSTDOCTORAL POSITIONS** in the following areas: (i) Lipid transport in biologic and model membranes, (ii) phospholipid distribution in tumor cell membranes (**Dr. A. Schroit**) and (iii) mechanisms of tumor progression and induction of tumor immune variants by DNA transfection (**Dr. P. Frost**). Interested applicants should submit a research background, curriculum vitae and names, addresses, and telephone numbers of three references to: **D. Linzer, University of Texas M.D. Anderson Cancer Center-173, 1515 Holcombe Boulevard, Houston, TX 77030.** Affirmative Action Employer.

POSTDOCTORAL POSITIONS IN MOLECULAR BIOLOGY

To study the molecular pathogenesis of influenza viruses and participate in international studies to resolve the origin of human influenza. The research involves (i) elucidation of the structural features determining virulence in the hemagglutinin, and (ii) determination of molecular basis of host range. Candidates can receive training in state-of-the-art molecular and immuno-biological techniques that are being used to address these questions.

Candidates should forward their curriculum vitae and three letters of reference to:

Dr. Robert G. Webster
Department of Virology and Molecular Biology
St. Jude Children's Research Hospital
332 North Lauderdale
Memphis, TN 38105

Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATE: Position available immediately for Ph.D./M.D. molecular biologist/biochemistry for studies of effects of microgravity on muscle injury repair, involving basement membrane, serine proteases and serpins. Experience in protein chemistry, molecular biology, histochemistry, including in situ hybridization, essential. U.S. citizen/permanent resident required. M.D. candidates may qualify for V.A. Career Development. Send curriculum vitae, letter of interest, and names/addresses of five references to: **Dr. Barry W. Festoff, Medical Investigator, Neurobiology (151), University of Kansas/VA Medical Center, 4801 Linwood Boulevard, Kansas City, MO 64128.** An Equal Employment Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITIONS available immediately to study the structural and functional properties of an extracellular matrix protein which promotes oncogenic transformation. Background in biochemistry, cell biology, molecular biology, or immunology desirable. Please send curriculum vitae and three letters of recommendation to: **Dr. Susan P. Hawkes, Department of Pharmacy, S-926, University of California, San Francisco, CA 94143-0446.** UCSF is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH dealing with behavioral aspects of chemical communication in *Lepidoptera*. Application of communication theories to studies of the functions of multi-component pheromones. Background in insect behavior or chemical ecology preferred. Available after 1 September 1989. Send curriculum vitae, relevant publications, and names and addresses of three references to: **Dr. Kenneth F. Haynes, Department of Entomology, University of Kentucky, Lexington, KY 40546.**

POSTDOCTORAL RESEARCH ASSOCIATE IN ELECTRON MICROSCOPY to work on image reconstruction from negatively stained and frozen hydrated samples of protein toxins and other structures, as part of the Vanderbilt structural biology group, which includes **Drs. Gerald Stubbs, John Robinson, and Paula Flicker.** Send curriculum vitae and names of three references to: **Dr. John P. Robinson, Department of Microbiology, Vanderbilt University, Nashville, TN 37232-2363.**

POSTDOCTORAL RESEARCH ASSOCIATE POSITION available to study growth factor-oncogene interactions and signalling mechanisms involved in cell proliferation and transformation. The research involves use of recombinant DNA technology and recombinant retroviruses in eukaryotic tissue-culture systems. Candidates must have a Ph.D. with a background which includes molecular biology, somatic cell genetics, mammalian mutagenesis and gene expression systems and retrovirology, as well as regulation of genes, immunology and FACS. Submit résumé, research interests, transcripts, and names of three references to: **Dr. M. J. Weber, Department of Microbiology, Box 441, University of Virginia School of Medicine (UVA), Charlottesville, VA 22908.** UVA is an Equal Opportunity Employer.

POSTDOCTORAL RESEARCH POSITION available immediately for molecular biologic studies of a human metastases-associated gene. Experience with cDNA cloning, DNA sequencing and expression vectors is highly desirable. Send application including curriculum vitae, a brief summary of previous training, experience and research goals along with the names of three references to:

George D. Sorenson, M.D.
Department of Pathology
Dartmouth Medical School
Hanover, NH 03756

RICE UNIVERSITY POSTDOCTORAL RESEARCH POSITION

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

RESEARCH ASSISTANT PROFESSOR—Division of Clinical Immunology and Rheumatology, Department of Medicine. Non-tenure earning position for a Ph.D. in immunology or biochemistry. Join a leading team of clinicians and scientists at a major university. Candidates with at least 5 years of postdoctoral experience in immunochemistry with a focus on structure/function relationships of acute-phase and/or complement proteins are encouraged to apply. Experience with cell culture techniques desirable. Send curriculum vitae and three references to: **John E. Volanakis, M.D., Anna Lois Waters Professor of Medicine, THT 437, The University of Alabama at Birmingham, Birmingham, AL 35294.** The University of Alabama at Birmingham is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL/RESEARCH ASSOCIATE—Position available to study gene expression of metalloproteinases in connective tissue diseases. Research focuses on transcriptional regulation, DNA responsive elements and DNA/protein interactions. Molecular biology experience is desirable. Send curriculum vitae and statement of research interests to: **Dr. Constance Brinckerhoff, Department of Biochemistry, Dartmouth Medical School, Hanover, NH 03756.**

PRE- AND POSTDOCTORAL FELLOWS

The National Institutes of Mental Health (Neurosciences Research Branch) and the Center for Complex Systems at Florida Atlantic University announce a new, nationwide training program in Complex Systems and the Brain Sciences. The aim is to blend emerging concepts in complex systems (e.g., in nonlinear dynamics and so-called "chaos theory") with specific experimental model systems in the behavioral and brain sciences. Graduate training consists of a core curriculum in the mathematics of nonlinear dynamical systems, neuroscience (including neural networks and cognitive science) and computational science leading initially to a Ph.D. degree in a cognate area and eventually to a fully interdisciplinary degree. Ample opportunities are available for winter workshops, for short-term training, and collaborative visits with other nodes in the network (University of California, Berkeley, Medical College of Pennsylvania, University of California, San Diego, and Cornell University) and ancillary activities.

Fellowships are for an initial period of 3 years with possible extension to five. Level of support is determined by current NIH guidelines. Prospective graduate fellows with an undergraduate degree in any of the behavioral and natural sciences and postdoctoral candidates should send a letter of application, GRE scores (predoctoral only), curriculum vitae and four letters of recommendation to: **Dr. J. A. S. Kelso, Director, Program in Complex Systems and Brain Sciences, Center for Complex Systems, Florida Atlantic University, Boca Raton, FL 33431.** FAU is an Affirmative Action/Equal Opportunity Employer.

The University of Minnesota, Department of Horticultural Science, is accepting applications for the position of **PROFESSOR AND HEAD.** Applicants must possess a Ph.D. or doctoral degree in horticulture or related plant science and at least 8 years of experience beyond the doctorate. Candidates should possess an understanding of the horticultural industry; demonstrated excellence in horticulture or a related plant science; and have administrative, communication and organizational skills. Twelve-month, tenured faculty position as Professor. Initial appointment as Head is for 5 years. Successful applicant will lead the Department in formulating and implementing strategies that foster horticulture; oversee continued development of departmental personnel and facilities; coordinate Department's programs in extension, research and teaching; understand disciplines represented in Department; manage fiscal resources; seek and secure financial support; encourage interdisciplinary and disciplinary cooperation; interact with faculty, staff, and students to enhance collegial and enthusiastic working atmosphere. By 2 October 1989, send curriculum vitae, statement that includes philosophy of administration and goals for a department of horticulture, and names and address of three references to: **Dr. Richard Goodrich, Chair, Search Committee, 120 Peters Hall, University of Minnesota, St. Paul, MN 55108.**

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

RESEARCH ASSISTANT PROFESSOR, Ph.D. to join a leading team of clinicians and scientists at a major university. Applicants with experience and an active interest in connective tissue research and teaching in the biochemical and molecular analysis of cartilage extracellular matrix components are encouraged to apply. Send curriculum and reply to: **William J. Koopman, M.D., Howard L. Holley Professor of Medicine, Director, Division of Clinical Immunology and Rheumatology, The University of Alabama at Birmingham, Birmingham, AL 35294.** The University of Alabama at Birmingham is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

RESEARCH ASSISTANT PROFESSOR HEAD AND NECK TUMOR MOLECULAR BIOLOGY

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

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

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

RESEARCH ASSOCIATE: A Ph.D. or M.D. is sought for postdoctoral position available immediately. The work will involve development of viral vectors based on Herpes Simplex Virus Type 1, with emphasis on vectors with altered cell specificity. Experience in virology and/or molecular biology is desirable. Send curriculum vitae (include names and addresses of three references) to: **Dr. Thomas C. Holland, Department of Immunology and Microbiology, Wayne State University School of Medicine, 540 East Canfield, Detroit, MI 48201. Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE is required by the Department of Plant Sciences. Must have a Ph.D. (or equivalent) with at least 5 years of experience with *Zea mays* genetics and tissue culture. Experience should be supported by candidate thesis work and/or publication (at least in submission). Salary: \$24,000 plus benefits.

In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada.

Résumés may be submitted to: **Martha Harley, Employment, 262 Stevenson-Lawson Building, The University of Western Ontario, London, Ontario N6A 5B8.**

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RESEARCH ASSOCIATE IN VIRUS CRYSTALLOGRAPHY

Postdoctoral research associate sought for crystallographic studies of papovavirus and reovirus structures. Experience with very large unit cell crystallography important, including synchrotron radiation data collection and non-crystallographic symmetry phase determination methods. Send curriculum vitae and three references to: **Professor S. C. Harrison, HHMI, Harvard University, 7 Divinity Avenue, Cambridge, MA 02138.**

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Nine of fourteen state-funded, tenure-track faculty positions are available for appointment at the assistant to full professor level with a start date of September 1990. Neuroscientists stimulated by the opportunities offered by the integrative focus and collaborative environment of the Center in the areas of molecular and behavioral research are encouraged to apply. Research areas of interest include (but are not limited to) molecular neurobiology, human neuropsychology and electrophysiology, brain imaging, cognitive neuroscience, computer neural modeling, neuroimmunology, neuroanatomy, neurochemistry, psychopharmacology, developmental neurobiology and behavioral genetics. Neuroscientists with a basic research focus in neurologic or psychiatric disease are particularly encouraged to apply. State of the art laboratories and equipment for human and animal research, library and conference facilities will be available in the new research Center which will be built at the Rutgers-Newark campus with scheduled completion in September 1990. The Center will be in close proximity to (and with joint appointments possible in) the Institute for Animal Behavior and the Departments of Psychology, Chemistry and Biological Sciences at Rutgers, and UMDNJ Medical School. The Newark campus is close to both New York City and attractive New Jersey countryside living. Interested neuroscientists should send their CV, names of three references and a brief letter of research goals and philosophy to Drs. Tallal and Creese, Rutgers University, Center for Molecular & Behavioral Neuroscience, 195 University Avenue, Newark, NJ 07102.

RUTGERS is an affirmative action/equal opportunity employer.

POSITIONS OPEN

RESEARCH ENGINEER for university in south-west Ohio to conduct both analytical and experimental cracking studies of aerospace materials subject to wide range of loading and environmental conditions. Develop experimental capability for conducting experimental evaluations of fracture behavior of brittle materials. Develop analytical capability for estimating combined effects of mechanical and thermal loading on crack growth potential of aerospace structures. Responsible for preparation of progress reports, technical reports and journal article publications that summarize work in above areas. Prepare proposals for funding projects in areas of applied fracture mechanics and material behavior of brittle materials. Supervise graduate and undergraduate students, technicians and junior-level (B.S. degree) type professional employees. No experience required in above duties but applicants will qualify with: Ph.D. in civil, aerospace, or mechanical engineering and 2 years of research experience (obtained during or after Ph.D. program) including a combination of experimental, numerical and analytical duties as well as responsibility for direct application of computer-controlled mechanical test systems for use in conducting fracture and crack growth tests on brittle materials, including 6 months of experience with thermomechanical fatigue loading and its effect on structural cracking behavior. Must have demonstrated research creativity by having published at least five peer-reviewed, professional-level technical articles in field of fracture mechanics as applied to study of mechanical behavior of brittle materials; each of these technical publications must have been communicated to professional society audiences. Forty hours per week; 8 a.m. to 5 p.m.; \$39,600 per year. G. Maugans, JO# 1201931, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.

RESEARCH SCIENTIST DEPARTMENT OF BRAIN AND COGNITIVE SCIENCES

To take major responsibility for running current project designed to study vision and visuomotor control in primates using neurophysiological and psychological methods.

Requirements: all candidates must possess a Ph.D. in Psychophysics with a very strong mathematical and biological background; minimum of 3 years of postdoctoral research training; experience in conducting psychophysical and neurophysiological experiments in vision, preferably on non-human primates; thorough familiarity with RT11, VMS, UNIX and DOS systems, and C, FORTRAN, and Macro-11 programming languages; knowledge of neural modeling methods. Salary range: \$36,000 to \$39,000. Please send two copies of both résumé and cover letter referencing Job No. R89-150 to: Ms. Ramona Alston, MIT Personnel Office, Building E19-239, 400 Main Street, Cambridge, MA 02139. MIT is an Equal Opportunity/Affirmative Action Employer. MIT is a non-smoking environment.

CALIFORNIA INSTITUTE OF TECHNOLOGY

Applications are being accepted for the position of **SENIOR RESEARCH FELLOW IN GEOPHYSICS**. We seek a seismologist, tectonophysicist, or geophysicist with a minimum of 3 years of post-Ph.D. experience to manage and modernize the Southern California Seismic Array and make the increasingly broadband and digitally based database available to the scientific community.

This person would divide equally his/her time between:

- 1) modernizing and operation of the array, computerizing analysis procedures, and developing the ability to operate during and immediately after a very strong earthquake, and
- 2) conducting personal research on earthquakes, seismotectonics, and/or earth structure.

Please reply by 31 August 1989 and send résumé, preprints and reprints of recent publications, and three references to: **Professor Peter Goldreich, Acting Chairman, Division of Geological and Planetary Sciences 170-25, California Institute of Technology, Pasadena, CA 91125.** The California Institute of Technology is an Equal Opportunity/Affirmative Action Employer. Applications are encouraged from qualified women and minority candidates.

POSITIONS OPEN

RESEARCH ENGINEER to work primarily on interfacing biosystems and microprocessor-based electronics and recording of neuronal tissue preparations. Previous experience in light microscopy and microdissection is desirable. The candidate should have a B.S. degree and background in electrical engineering or computer science with academic training in the field of biology. Salary: \$29,099. Letters of application, résumé, and names of three references should be sent to: **George Johns, Alabama State Employment, P.O. Box 12046, Birmingham, AL 35202.** Job Order AL0553180.

SEED PATHOLOGIST/MICROBIOLOGIST

The Department of Plant Pathology, University of California, Davis, invites applications for an 11-month (1-month vacation) tenure-track position, at the assistant professor level.

Responsibilities: Develop a research program dealing with plant pathogens and/or microorganisms associated with seeds as they relate to plant health. Research can be a combination of basic and applied efforts on the etiology, epidemiology, detection and management of seed-borne pathogens/microorganisms.

Instruction in a graduate and undergraduate plant pathology courses and participation in seminar courses will be required. The applicant will be expected to supervise graduate students in plant pathology and possibly related graduate groups, and may advise undergraduate students.

Applicants should have a Ph.D. in plant pathology or a related discipline. Postdoctoral experience is desirable but not required. Applicants should submit: (i) curriculum vitae, (ii) list of published work and reprints, (iii) a statement of teaching and research interests, (iv) names and addresses of three references, and (v) transcripts, if Ph.D. degree completed within the last 5 years, to:

**Bryce W. Falk, Chairman, Search Committee
Department of Plant Pathology
University of California, Davis, CA 95616
Telephone: 916-752-0302/0300**

Application deadline: 31 October 1989

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

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

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

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

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Physiology: Dr. N. E. Tolbert, Dr. B. O. Phinney
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Evolution: Dr. Melvin Fuller, Dr. Lynn Margulis
Biotechnology: Dr. M. G. Murray, Dr. Richard Flavell
All-Conference Speakers: Dr. Ernst Abbe, Dr. C. J. Amten

Contact: **Dr. Irwin Rubenstein, Head, Department of Plant Biology, University of Minnesota, 220 Bio-Science Center, St. Paul, MN 55108.** Telephone: 612-625-1234; FAX: 612-625-5754.

POSITIONS OPEN

TECHNICAL SALES AND SUPPORT

IBI/A Kodak Co. needs highly motivated individuals to apply their technical expertise in molecular biology and related disciplines. Individuals should have M.S./B.S. with laboratory experience and strong communication skills. Qualified applicants should send their résumé or contact: **Geof Jowett at IBI, 25 Science Park, 275 Winchester Avenue, New Haven, CT 06511.** Telephone: 800-243-2555.

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The Weizmann Institute of Science, Rehovot, Israel, offers a limited number of visiting professorships in the natural and exact sciences.

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Deadline for submission of completed applications is: 30 November 1989.

For further information or application forms, please contact: **The Academic Secretary, The Weizmann Institute of Science, Rehovot 76100, ISRAEL.** Telex: 972-8-381300, facsimile: 972-8-471667, Bitnet: RSMARJOR @ WEIZMANN.

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Deadline for applications is 30 November 1989. Further information is available on request from: **Academic Secretary's Office, Weizmann Institute, Rehovot 76100, Israel.** Bitnet: RSMARJOR at Weizmann, Telex: 381300, Facsimile: 972-8-471667.

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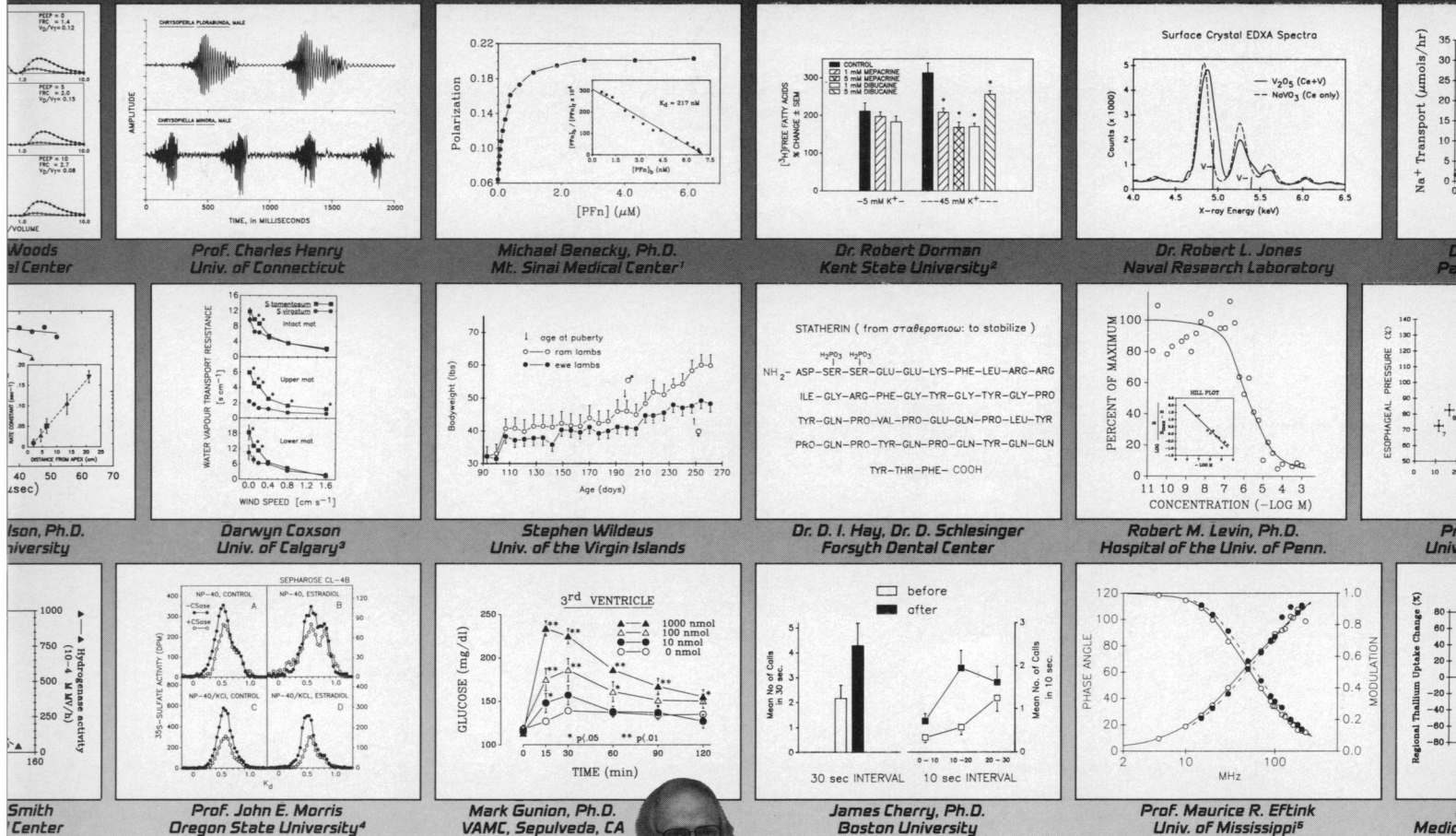
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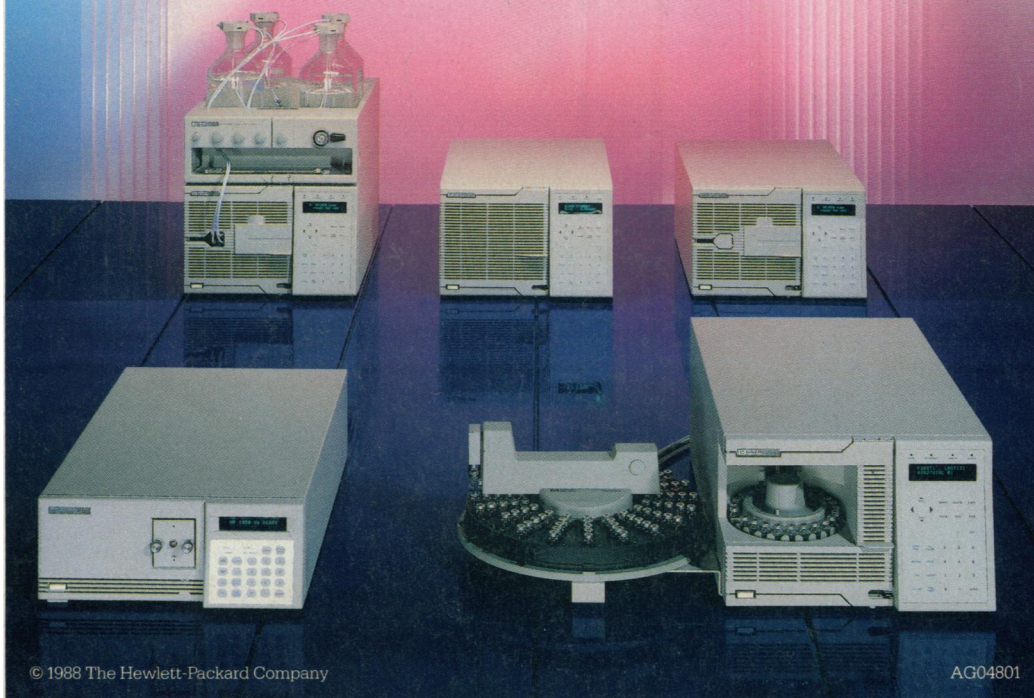
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