

opments in V-type liquid-cooled engines, on which information is certainly available and which would have offered some fascinating comparisons of developments in all the powers.

Despite these problems, the book performs a valuable service in collecting information about widely disparate developments in science and technology in Britain in World War I and offering some interesting comparisons that may serve as the starting point for further comparative research in the areas discussed. The author presents much highly technical information in a fashion that makes it accessible to the general reader, not just to the scientists and engineers who should be intrinsically interested in *The War of Invention*.

JOHN H. MORROW, JR.
National Air and Space Museum,
Washington, DC 20560

Reprints of Books Previously Reviewed

Experimental Approaches to Mammalian Embryonic Development. Janet Rossant and Roger A. Pedersen, Eds. Cambridge University Press, New York, 1988. Paper, \$29.95. Reviewed 238, 970 (1987).

Medicine, Mind, and the Double Brain. Anne Harrington. Princeton University Press, Princeton, NJ, 1988. Reviewed 239, 422 (1988).

Books Received

Animal Behavior. An Evolutionary Approach. John Alcock. 4th ed. Sinauer, Sunderland, MA, 1988. xviii, 596 pp., illus. \$34.95.

Anthropology for Tomorrow. Creating Practitioner-Oriented Applied Anthropology Programs. Robert T. Trotter II, Ed. American Anthropological Association and National Association for the Practice of Anthropology, Washington, DC, 1988. iv, 194 pp. Paper, \$20. Special Publication no. 24.

Applications of Plant Cell and Tissue Culture. Gregory Bock and Joan Marsh, Eds. Wiley-Interscience, New York, 1988. x, 269 pp., illus. \$54.95. Ciba Foundation Symposium, vol. 137. From a symposium, Kyoto, Japan, Oct. 1987.

Arachidonate Metabolism in Immunologic Systems. Lawrence Levine, Eds. Karger, Basel, 1988. viii, 214 pp., illus. \$98.75. Progress in Allergy, vol. 44.

Architecture of Eukaryotic Genes. G. Kahl, Ed. VCH, New York, 1988. xiv, 518 pp., illus. \$129. Based on a symposium, Frankfurt am Main, F.R.G., 1986.

Autobiographical Memory. David C. Rubin, Ed. Cambridge University Press, New York, 1988. x, 298 pp., illus. Paper, \$19.95. Reprint, 1986 ed.

The Beginning of the Use of Metals and Alloys. Robert Maddin, Ed. MIT Press, Cambridge, MA, 1988. xiv, 393 pp., illus. \$55. From a conference, Zhengzhou, China, Oct. 1986.

Biology of Anaerobic Microorganisms. Alexander J. B. Zehnder, Ed. Wiley-Interscience, New York, 1988. xiv, 872 pp., illus. \$89.95. Wiley Series in Ecological and Applied Microbiology.

Catalogue of the Garnham Collection of Malaria Parasites and Other Haemosporidia. P. C. C. Garnham and A. J. Duggan. Cambridge University Press, New York, 1988. iv, 191 pp. Paper, \$24.95.

Cell and Molecular Biology of Vertebrate Hard Tissues. David Evered and Sara Harnett, Eds. Wiley, New York, 1988. x, 307 pp., illus. \$54.95. Ciba Foundation Symposium, vol. 136. From a symposium, London, U.K., Oct. 1987.

Cell Cycle Control in Eukaryotes. David Beach, Claudio Basilico, and John Newport, Eds. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, 1988. xii,

211 pp., illus. Paper, \$20. Current Communications in Molecular Biology. From a meeting, Cold Spring Harbor, NY, March 1988.

Cell Kinetic Modelling and the Chemotherapy of Cancer. Helmut Knolle. Springer-Verlag, New York, 1988. viii, 157 pp., illus. Paper, \$18.90. Lecture Notes in Biomathematics, vol. 75.

Cellular Factors in Development and Differentiation. Embryos, Teratocarcinomas, and Differentiated Tissues. Stephen E. Harris and Per-Erik Mansson, Eds. Liss, New York, 1988. xvi, 250 pp., illus. \$54. Progress in Clinical and Biological Research, vol. 284. From a symposium, Lake Placid, NY, Aug.-Sept. 1987.

Chemical Demonstrations. A Sourcebook for Teachers. Vol. 1. Lee R. Summerlin and James L. Ealy, Jr. 2nd ed. American Chemical Society, Washington, DC, 1988. xii, 198 pp., illus. Spiral bound, \$19.95.

The Chemical Revolution. Essays in Reinterpretation. Arthur Donovan, Ed. History of Science Society, Philadelphia, PA, 1988. 236 pp., illus. Paper, \$24, paper, \$15. *Osiris*, vol. 4.

Chinese Economic Reform. How Far, How Fast? Bruce L. Reynolds, Ed. Academic Press, San Diego, CA, 1988. viii, 233 pp. \$29.95. From a conference, Harman, New York, Oct. 1988.

Class Number Parity. P. E. Conner and J. Herrelbrink. World Scientific, Teaneck, NJ, 1988. xii, 234 pp. \$38. Series in Pure Mathematics, vol. 8.

The Cognitive Structure of Emotions. Andrew Ortony, Gerald L. Clore, and Allan Collins. Cambridge University Press, New York, 1988. xii, 207 pp. \$29.95.

The Domestication of the Human Species. Peter J. Wilson. Yale University Press, New Haven CT, 1989. xvi, 201 pp. \$18.50.

Earthquake Engineering. Mechanism, Damage Assessment and Structural Design. S. F. Borg. 2nd ed. World Scientific, Teaneck, NJ, 1988. xiv, 331 pp., illus. \$64.

Ecdynamics. Contributions to Theoretical Ecology. W. Wolff, C.-J. Soeder, and F. R. Drepper, Eds. Springer-Verlag, New York, 1988. xii, 349 pp., illus. \$67.30. Research Reports in Physics. From a workshop, Jülich, F.R.G., Oct. 1987.

Electrons in Solids. An Introductory Survey. Richard H. Bube. 2nd ed. Academic Press, San Diego, CA, 1988. xiv, 315 pp., illus. \$39.50.

Endocrine Management of Infertility. Terrence J. Wilkin, Ed. Harwood, New York, 1988. x, 101 pp., illus. Paper, \$46. Based on a symposium, Southampton, U.K.

Environmental Hygiene. N. H. Seemayer and W. Hadnagy, Eds. Springer-Verlag, New York, 1988. xiv, 214 pp., illus. \$55.90. From a meeting, Düsseldorf, F.R.G., May 1987.

From Monopoly to Competition. The Transformations of Alcoa, 1888-1986. George David Smith. Cambridge University Press, New York, 1988. xxiv, 554 pp., illus. \$29.95.

Frontiers in Excitatory Amino Acid Research. Esper A. Cavalheiro, John Lehmann, and Lechoslaw Turski, Eds. Liss, New York, 1988. xxvi, 745 pp., illus. \$130. Neurology and Neurobiology, vol. 46. From a symposium, Manaus, Brazil, March-April 1988.

Harnessing the Genie. Science and Technology Forecasting for the Air Force, 1944-1986. Michael H. Gorn. Office of Air Force History, Washington, DC, 1988 (available from Superintendent of Documents, Washington, DC). 209 pp., illus. Paper, \$9. Air Staff Historical Study.

Hexaflexagons and Other Mathematical Diversions. The First Scientific American Book of Puzzles and Games. Martin Gardner. University of Chicago Press, Chicago, 1988. x, 200 pp., illus. Paper, \$10.95. Reprint of *The Scientific American Book of Mathematical Puzzles and Diversions* (New York, 1959).

A History of Metallography. The Development of Ideas on the Structure of Metals Before 1890. Cyril Stanley Smith. MIT Press, Cambridge, MA, 1988. xxviii, 297 pp., illus. Paper, \$15. Reprint, 1960 ed.

HIV and the Nervous System. Proceedings of the Symposium on Neurological Aspects in AIDS. (Berlin, F.R.G., Feb. 1987.) St. Kubicki et al., Eds. Fischer, Stuttgart, 1988 (U.S. distributor, VCH, New York). xii, 227 pp., illus. Paper, \$58.

Homelessness, Health, and Human Needs. Institute of Medicine. National Academy Press, Washington, DC, 1988. xiv, 242 pp. Paper, \$19.95.

An Introduction to Psychiatric Research. Richard E. Gordon, Carolyn J. Hirsch, and Katherine K. Gordon. Cambridge University Press, New York, 1988. xx, 257 pp., \$29.95.

Introduction to Quasicrystals. Marko V. Jarić, Ed. Academic Press, San Diego, CA, 1988. x, 285 pp., illus. \$49.50. Aperiodicity and Order, vol. 1.

Physics, Philosophy, and Theology. A Common Quest for Understanding. Robert J. Russell, William R. Stoeger, and George V. Coyne, Eds. Vatican Observatory, Vatican City State, 1988 (U.S. distributor, University of Notre Dame Press, Notre Dame, IN). 419 pp. \$30; paper, \$14.95.

Pollution and the Struggle for the World Product. Multinational Corporations, Environment, and International Comparative Advantage. H. Jeffrey Leonard. Cambridge University Press, New York, 1988. xii, 254 pp. \$39.50.

Polymers for Advanced Technologies. Menachem Lewin, Ed. VCH, New York, 1988. xvi, 953 pp., illus. \$125. Based on a symposium, Jerusalem, Israel, Aug. 1987.

Precambrian in Younger Fold Belts. European Variscides, the Carpathians and Balkans. Vladimir Zoubek et al., Eds. Wiley-Interscience, New York, 1988. xii, 885 pp., illus. \$350. International Geological Correlation Programme, project 22.

Predatory Dinosaurs of the World. A Complete Illustrated Guide. Gregory S. Paul. Simon and Schuster, New York, 1988. 464 pp., \$22.95. A New York Academy of Sciences Book.

A Primate Radiation. Evolutionary Biology of the African Guenons. Annie Gautier-Hion et al., Eds. Cambridge University Press, New York, 1988. viii, 567 pp., illus., + plates. \$120.

Science as Power. Discourse and Ideology in Modern Society. Stanley Aronowitz. University of Minnesota Press, Minneapolis, 1988. xii, 384 pp. \$35; paper, \$14.95.

Science for Children. Resources for Teachers. National Science Resources Center. National Academy Press, Washington, DC, 1988. xii, 176 pp., illus. Paper, \$7.95.

Self-Representation. Seymour L. Zelen, Ed. Springer-Verlag, New York, 1988. vi, 178 pp. Paper, \$35. Recent Research in Psychology. From a conference, Los Angeles, 1986.

Sensory Deception. A Scientific Analysis of Hallucination. Peter D. Slade and Richard P. Bentall. Johns Hopkins University Press, Baltimore, 1988. x, 275 pp. \$37.50. Johns Hopkins Series in Contemporary Medicine and Public Health.

Ships and Shipwrecks of the Americas. A History Based on Underwater Archaeology. George F. Bass, Ed. Thames and Hudson, New York, 1988 (distributor, Norton, New York). 272 pp., illus. \$40.

The Short-Tailed Fruit Bat. A Study in Plant-Animal Interactions. Theodore H. Fleming. University of Chicago Press, Chicago, 1988. xvi, 365 pp., illus. \$49.95. Wildlife Behavior and Ecology.

Statistical Analysis in Art Conservation Research. Terry J. Reedy and Chandra L. Reedy. Getty Conservation Institute, Marina del Rey, CA, 1988. viii, 107 pp., illus. Paper, \$16. Research in Conservation, vol. 1.

A Stereotaxic Atlas of the Brain of the Chick (*Gallus domesticus*). Wayne J. Kuenzel and Manju Masson. Johns Hopkins University Press, Baltimore, 1988. x, 166 pp., \$69.50. Maryland Agricultural Experiment Station Scientific Article no. A-4764.

Stylistic Boundaries among Mobile Hunter-Foragers. C. Garth Sampson. Smithsonian Institution Press, Washington, DC, 1988. 186 pp., illus. \$31.50. Smithsonian Series in Archaeological Inquiry.

Superstrings and the Search for the Theory of Everything. F. David Peat. Contemporary Books, Chicago, 1988. vi, 362 pp., illus. \$19.95.

Surface Structures of Microorganisms and Their Interactions with the Mammalian Host. E. Schriener et al., Eds. VCH, New York, 1988. viii, 267 pp., illus. \$69. From a conference, Schloss Ringberg, F.R.G., Oct. 1987.

Surfactant Science and Technology. Drew Meyers. VCH, New York, 1988. xiv, 351 pp., illus. \$45.

Theoretical and Experimental Methods of Heavy-Ion Physics. Z. Wilhelmi and G. Szeffinska, Eds. Harwood, New York, 1988. xiv, 275 pp., illus. Paper, \$56. Nuclear Science Research Conference Series, vol. 15. From a school, Mikolajki, Poland, Aug.-Sept. 1987.

Theoretical Physics on the Personal Computer. Erich W. Schmid, Gerhard Spitz, and Wolfgang Lösch. Springer-Verlag, New York, 1988. xii, 211 pp., illus., + floppy disk in pocket. \$49.50.

Tidal Flat Estuaries. Simulation and Analysis of the Ems Estuary. J. Baretta and P. Ruardij, Eds. Springer-Verlag, New York, 1988. xviii, 353 pp., illus. \$113. Ecological Studies, vol. 71.

The Transition to Parenthood. Current Theory and Research. Gerald Y. Michaels and Wendy A. Goldberg, Eds. Cambridge University Press, New York, 1988. xii, 381 pp. \$39.50. Cambridge Studies in Social and Emotional Development.

Products & Materials

System for Probe Synthesis and Hybridization

The Rapid Hybridization System—Multi-prime allows synthesis of high specific-activity probes in 30 min and subsequent hybridization with nucleic acid blots in 2 hours. The system is composed of a DNA labeling kit and a hybridization buffer designed to increase hybridization rate without high probe concentrations. With probe concentrations between 2 and 8 ng/nl, sensitivities after 2 hours are comparable to those obtained overnight with conventional buffers. Amersham International (United Kingdom). Circle 502.

Drawing Utility for Chemical On-Line Searches

ChemConnection is a Macintosh desk accessory for building chemical structure or substructure search queries for searching CAS ONLINE. It allows the chemist to draw a query structure off-line to save money and time. No knowledge of the structure generation commands of CAS ONLINE is required. ChemConnection operates on Macintosh XL, Plus, SE, and II computers with at least 1 megabyte of random-access memory and a hard disk drive. \$395. Soft-Shell International. Circle 504.

Modular Environmentally Controlled Chamber

The MiniLab is a small, sealed room, the environment of which can be controlled. Available either knocked-down or as a factory-assembled unit, the MiniLab comes with all equipment and controls necessary to adjust and maintain environmental parameters. Temperatures can be between 7° and 29°C, and relative humidity can be between 30 and 80%. Both positive and negative pressurization of the MiniLab are possible. The environmental control unit is available either water-cooled or air-cooled and can be customized. Clean Room Technology. Circle 499.

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.

Columns for Amino Acid Analysis

PolySpher AAS Columns are ion-exchange polymeric columns for amino acid determination by high-performance liquid chromatography. The columns can separate amino acids from protein hydrolysate or free amino acids in solution in 20 min without prederivatization. Packed in the columns are 5- μ m particles. The columns are stable with both aqueous and organic gradients, at pH from 0 to 14, and at pressures as high as 200 atm. EM Science. Circle 503.

Antibodies

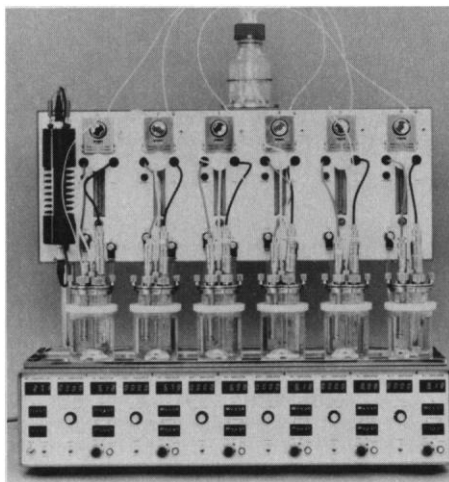
Conjugated and unconjugated monoclonal antibodies to infectious disease agents, including *Chlamydia*, cytomegalovirus, and respiratory syncytial virus. Viro-Stat. Circle 508.

Monoclonal antibodies to human spectrin. Serotec (United Kingdom). Circle 509.

Affinity-purified secondary goat antibodies to rat immunoglobulin G (H + L), immunoadsorbed against mouse serum. Bethesda Research Laboratories. Circle 510.

Six-Vessel Culture System

The Micro-Jar Fermentor is a culture system with six vessels for simultaneous experiments. The experimental parameters in each 200-ml fermentor jar may be differ-



ent; these parameters include dissolved oxygen, pH, air flow rate, and agitation speed. Included with the Micro-Jar Fermentor are a peristaltic pump, an air-flow meter, a digital temperature display, and a digital agitation-speed display for each jar. Xyferm-Filenco, a Division of JSJ Manufacturing. Circle 497.

Vibrating Microtome

The Micro Cut H1200 vibrating microtome sections fresh or frozen tissue. Because it does not require that tissue be frozen or embedded, enzyme activity is preserved and structural damage is minimized. Samples sectioned by the H1200 are appropriate for immunocytochemistry, enzyme histochemistry, and fluorescent antibody studies. The microtome can cut sections in thicknesses of 10 to 100 μ m. The user sets the thickness desired on a backlash-free dial with click-stop settings every 10 μ m. Because the user can control the cutting frequency and blade speed, many different tissue types can be sectioned. The specimen stage accepts samples as large as 40 mm in diameter. The blade does not move vertically during cutting, and it retracts after each cutting cycle. EMCorp, Electron Microscope Supplies Division. Circle 495.

Literature

The *Industrial and Lab Plastics Catalog* lists bottles, beakers, valves, tubing, pumps, buckets, storage bins, and other plastic products. Consolidated Plastics. Circle 493.

The 340-page *Nuclear Products Catalog* features electronic research instruments, including data acquisition systems and high-voltage systems. LeCroy. Circle 494.

The 544-page *Biochemical/Immunochemical Catalog 1989* features amino acids, lipids, antibiotics, antibodies, buffers, carbohydrates, detergents, growth factors, dyes, enzymes, peptides, proteins, and nucleotides for research use. Calbiochem. Circle 511.

1988/1989 *Biological Research Products Catalogue and Applications Guide* lists molecular biological and immunological products. Promega, Research Products. Circle 512.

DB-23/DB-FFAP is a technical bulletin that describes applications for two gas chromatography stationary phases. J&W Scientific. Circle 513.

The 1989 *Products Catalog* is a catalog of nonradioactive DNA probes, monoclonal antibodies, biotinylated nucleotides, and other products for biological and medical research and pathology. Enzo Diagnostics. Circle 516.

Product Catalog 1989 features test kits, histochemical antisera, fluorescent conjugates, immunoglobulin G fractions, and other products and accessories for immunoassays. INCSTAR. Circle 518.

231/401 *Auto-Sampling Injector* describes a high-performance liquid chromatography instrument for sample preparation, rinsing procedures, injection, and signal monitoring. Gilson Medical Electronics. Circle 521.

Personnel Placement

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

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

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

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

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

Blind ad replies should be addressed as follows:

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

POSITIONS WANTED

Biochemist/chemist Ph.D. (1976) with experience in proteins and DNA analysis and immunochemistry seeks career change to permanent position in physical anthropology/archaeology. Many publications, teaching experience, languages, liberal arts. Box 26, **SCIENCE**.

Environmental/Comparative Physiologist, Ph.D. Established investigator with publications in thermoregulation, perinatal development, and drug-stress interaction. Current funding in ethanol research. Seeks academic position offering teaching and research opportunities. Box 27, **SCIENCE**.

Immunologist, Ph.D. Cellular immunologist, postdoctoral experience. Infectious and autoimmune disease models, cytokines, T-cell activation, signal transduction, ELISA, tissue culture, and molecular biology. Seeks academic or industry position. Box 29, **SCIENCE**.

POSITIONS WANTED

Immunologist, Ph.D. Senior scientist with extensive background in academic and biotechnology research and development. Experience in cellular immunology, hybridomas, monoclonal antibodies, and immunotherapy in cancer. Excellent project manager and laboratory director. Seeking responsible position in biotechnology industry. Box 28, **SCIENCE**.

Neuroscientist, Ph.D. Five years of postdoctoral research experience in neuropharmacology, neurodegenerative disease, neuroanatomy. Immunocytochemistry, computerized image analysis, morphological and analytical histochemistry. Desires research position. Willing to relocate. Available in March 1989. Box 17, **SCIENCE**.

POSITIONS OPEN

ACADEMIC PATHOLOGISTS

The Department of Pathology, University of Illinois College of Medicine at Peoria, invites applications from pathologists with training and experience in one or more of the following areas: Molecular diagnosis, molecular immunology, molecular genetics, immunopathology, tumor immunology, flow cytometry, electron microscopy or forensic pathology. In addition to teaching medical students the successful candidates will establish an extramurally funded research program and/or a subspecialty reference service. Two tenure-track positions are available, one each at the assistant and associate professor levels. Applicants should submit curriculum vitae, list of publications, names and telephone numbers of three references and a brief statement of academic interests and plans. Applications will be accepted until the positions are filled. Send applications to: **Gerald L. Bartlett, M.D., Ph.D., Chair, Department of Pathology, University of Illinois College of Medicine at Peoria, P.O. Box 1649, Peoria, IL 61656.**

An Affirmative Action/Equal Opportunity Employer.

ANIMAL PHYSIOLOGIST AND PLANT BIOLOGIST (two positions)—Texas A&I University, Department of Biology, seeks an animal physiologist and a plant biologist for two tenure-track assistant professor appointments starting late August 1989 (pending budget approval). A Ph.D. is required and the successful applicant for each position is expected to develop a vigorous research program within 2 years. Teaching responsibilities will include upper level and graduate animal physiology or plant biology courses and participation in the basic biology program. Postdoctoral experience is desirable.

Applicants should include with their curriculum vitae, official transcripts and statement of current research and teaching interests. Application and three letters of reference should reach the committee by 5 April 1989. Apply to: **Dr. Carl E. Wood, Chairman, Biology Department, Texas A&I University, Kingsville, TX 78363.**

Texas A&I is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE PROFESSOR MEDICAL COLLEGE OF OHIO

The Department of Surgery, Medical College of Ohio is searching for a G.I. (preferably hepatic) physiologist. Tenure-track position with opportunity for independent research program. Address inquiries (please include curriculum vitae) to: **Neil R. Thomford, M.D., Chairman, Department of Surgery, Medical College of Ohio, P.O. Box 10008, Toledo, OH 43699-0008.** *The Medical College of Ohio is an Equal Opportunity Employer.*

ASSISTANT OR ASSOCIATE PROFESSOR IN THE RESEARCH ASSOCIATE TRACK to assume major responsibility in a cellular electrophysiology laboratory studying the effects of arrhythmogenic influences and antiarrhythmic drugs on ionic currents, gap junctional conductance, and repolarization. Experience in voltage-clamping of myocytes and cell pairs useful. Excellent scientific environment. Renewable term appointment with full fringe benefits. *Equal Opportunity Employer.* Immediate availability. Please send curriculum vitae, representative reprints, and names of three references to: **Morton F. Arnsdorf, M.D., Chief, Section of Cardiology, University of Chicago Hospitals, Box 423, 5841 South Maryland, Chicago, IL 60637.**

POSITIONS OPEN

Applications are invited for two tenure-track positions as **ASSISTANT PROFESSOR** in physiology at University of Georgia. The successful candidates should have strong credentials for teaching systemic physiology to veterinary and graduate students. They also must research training that will allow the development of extramurally-funded research program. A D.V.M. (equivalent) and/or Ph.D. degree are required and doctoral experience is desirable. The areas of research emphasis in the department are: endocrinology, reproductive physiology, toxicology, renal pathophysiology and molecular genetics. Send curriculum vitae and names of three references by 15 April 1989 to: **Search Committee, Department of Physiology and Pharmacology, College of Veterinary Medicine, The University of Georgia, Athens, GA 30602.** *The University of Georgia is an Equal Opportunity/Affirmative Action Institution.*

York University, Toronto, Canada. Faculty of Science Department of Biology. A tenure-stream position: **ASSISTANT PROFESSOR** level, in plant ecology begin 1 July 1990. Applicants should have a Ph.D. equivalent and a strong record of research productivity in the area of plant ecology. Preference will be given to those with expertise in field ecology and with interest in ecological theory. Applications, including curriculum vitae and a letter stating research interests, and letters of reference, should be sent to: **Dr. M. B. Feenstra, Room 247D, Department of Biology, York University, North York, Ontario, Canada M3J 1P3.** Closing date for applications is 30 April 1989. *York University is implementing a policy of employment equity. Qualified women and men are invited to apply. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.*

ASSISTANT PROFESSOR. Tenured-track position available for candidate with at least 2 years postdoctoral training using neurophysiological techniques to study central monoamine systems in vivo, brain, slice and cell culture preparations. Expertise in pharmacology, biophysics, and the technique of electrophysiological recording, electrochemical identification and anatomical tracing desirable. The candidate would be expected to work in a collaborative setting where basic neuroendocrine findings are integrated with behavior, both normal and abnormal. Candidates should submit curriculum vitae, description of future research program, and have letters of reference sent to: **Benjamin S. Bunney, Jr., Chairman, Department of Psychiatry, Yale University School of Medicine, P.O. Box 3333, New Haven, CT 06520.** Closing date: 1 April 1989; the search continues until position is filled. *Yale is an Equal Opportunity/Affirmative Action Employer. Applications from women and minority group members are invited.*

Applications are invited for a tenure-track position at the level of **ASSISTANT PROFESSOR**, beginning September 1989. Teaching duties include immunology and cell biology at the advanced undergraduate-graduate (M.S.) level. The successful applicant will be expected to establish a strong research program in area of special interest. Submit curriculum vitae, statement of research interests, names, addresses, and telephone numbers of three references to: **Dr. Sean D. Cashman, Dean, Arts and Sciences, S-128 Adelphi University, Box 701, Garden City, NY 11530** by 30 March 1989. *Adelphi is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT OR ASSOCIATE PROFESSOR TENURE-TRACK POSITION DEPARTMENT OF OTOLARYNGOLOGY

The Otolaryngological Research Group is seeking a research biochemist with a background in carbohydrate/protein biochemistry with an emphasis on receptors, or adherence relative to developmental biology, to develop a biochemical/molecular biological program in the Department of Otolaryngology. Additional skill/knowledge of molecular biology desirable. Individual will participate in a team effort with a group of researchers studying disease. Salary commensurate with experience. Postdoctoral experience required. Send curriculum vitae and three professional references to: **Ms. Teresa M. The Ohio State University, Otolaryngological Research Laboratories, 456 West 10th Avenue, Room 4331, Columbus, OH 43210.**

POSITIONS OPEN

ASSISTANT OR ASSOCIATE PROFESSOR—BIOCHEMICAL TOXICOLOGY. Louisiana State University (LSU) is seeking a highly motivated person to develop a strong research program in biochemical toxicology. Position requires Ph.D. in chemistry, biochemistry, pharmacology, toxicology, or closely related field. This is a fiscal year (12-month) tenure-track appointment. Salary and date of employment are negotiable. Send résumé and three letters of recommendation to: **Dr. Charles R. Short, School of Veterinary Medicine, LSU, Baton Rouge, LA 70803**, by 15 April 1989. *LSU is an Equal Opportunity Employer.*

ASSISTANT OR ASSOCIATE PROFESSOR OF ANATOMY

Applications are invited for tenure-track positions at the assistant or associate professor level. Applicants at the assistant professor level should have a Ph.D., M.D., or equivalent, postdoctoral experience, an active research program with a high potential for attracting external support, and promise of ability as a teacher. Applicants at the associate professor level should have an ongoing, externally funded research program, an established record of scholarship supported by substantial publications, teaching experience, and a record of successful direction of doctoral candidates or fellows. Specific research areas are open, although preference will be given to cellular and molecular biology. Areas of specific teaching expertise are also open, although experience in or ability to teach gross human anatomy is highly desirable. *Women and minorities are encouraged to apply.*

Send curriculum vitae, bibliography, a brief statement of research and teaching experience, plus names of three references to: **Chair, Anatomy Faculty Search Committee, The University of Iowa College of Medicine, Iowa City, IA 52242.**

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

ASSOCIATE DIRECTOR. Recombinant DNA Core Laboratory, University of California, Los Angeles (UCLA)—Population Research Center. Requires ability to supervise technical and postdoctoral colleagues and to interact with active research programs in molecular genetics and reproductive biology. Recent Ph.D. degree in an area related to molecular biology and 1 to 3 years of postdoctoral experience required. Some time for independent research. Send curriculum vitae and three references to: **Larry J. Shapiro, M.D., Division of Medical Genetics, Harbor-UCLA Medical Center, 1000 West Carson Street, Torrance, CA 90509.**

ASSOCIATE PROFESSOR/PROFESSOR OF MEDICINE (infectious disease)—Chief, Division of Infectious Disease, Department of Medicine, University of California, San Diego (UCSD), School of Medicine. Candidates should be actively involved in investigation with evidence of continuing creative research accomplishments. Experience and skill in clinical infectious disease are required. The division has responsibility for teaching both the basic science of microbiology and clinical infectious disease. For professor rank, higher level of accomplishment required in scientific research, experience and ability in administration within academic setting. Board certification desirable. California Medical license or eligible to apply. Salary related to rank and step of appointment within salary schedule of UCSD School of Medicine Faculty Compensation Plan. Reply by 30 April 1989 to: **Gordon Gill, M.D., Department of Medicine, MO13E, University of California, San Diego, La Jolla, CA 92093.** *Affirmative Action/Equal Opportunity Employer.*

BOTANY/CELL BIOLOGY POSITION: Rank open, to start September 1989, Department of Life Science and Chemistry at the University of Texas (U.T.) of the Permian Basin, an upper level university of 2100 students. Duties include teaching small classes in botanical science and cell biochemistry and may include the role of Chairperson if an appropriate candidate is identified. Scholarly activity and innovative teaching will be encouraged. Leadership in our highly successful pre-med program is also required. Candidates should submit résumé and the names, addresses, and telephone numbers of three references to: **Dr. Don Allen, Life Science, U.T. Permian Basin, Odessa, TX 79762-8301.** Applications received by 31 March 1989 will receive full consideration. *Equal Employment Opportunity/Affirmative Action Employer. 742-9-865-S.*

POSITIONS OPEN

AVIAN ECOLOGIST

A research faculty position for an avian ecologist is available at the Savannah River Ecology Laboratory of the University of Georgia. Applicants should be interested in developing a long-term, experimental and field-oriented research program on the ecology of birds with an emphasis on waterfowl, including population characteristics, community relationships, and management in response to environmental perturbation. Ph.D. and U.S. citizenship required; postdoctoral experience preferred. A strong publication record, good communication skills, and an ability to work collaboratively are expected. Additional skills in an allied field such as statistics, stress ecology, genetics, or wildlife ecology are desirable. Faculty rank and salary are negotiable. Applicants should send a letter of application, brief description of research interests, curriculum vitae, selected reprints, and the names, addresses, and telephone numbers of four references by 7 April 1989 to: **Dr. William D. McCort, Chairman, Search Committee, Savannah River Ecology Laboratory, Drawer E, Aiken, SC 29802. Telephone: 803-725-2472.** *The University of Georgia is an Equal Opportunity/Affirmative Action Employer.*

BEHAVIORAL NEUROSCIENCE OPENING

Tenure-track position at full, associate, or assistant professor level. Area of specialty is open, but someone whose research will add to the existing strengths in psychopharmacology neural basis of learning and memory, or behavioral ecology/neuroethology will be of special interest.

Send curriculum vitae, three letters of reference, and copies of most important publications by 15 April 1989 to:

**Professor Charles F. Schmidt, Chairman
Department of Psychology
Rutgers University
New Brunswick, NJ 08903**

Rutgers is an Equal Opportunity/Affirmative Action Employer.

The Department of Biology at the College of Mount St. Joseph in Cincinnati has an opening for a broadly trained **BIOLOGIST** capable of teaching embryology, zoology, anatomy and physiology, and/or general biology. Interest in undergraduate research a must. Ph.D. required. Send curriculum vitae and arrange for three letters of reference to be sent, postmarked no later than 13 March 1989, to: **Dr. Gene Kritsky, Chair, Department of Biology, College of Mount St. Joseph, Mount St. Joseph, OH 45051.**

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE ST. LOUIS, MISSOURI DEPARTMENT OF PHARMACOLOGY CHAIRPERSON

Applications and nominations are invited for the position of Chairperson of the Department of Pharmacology. Candidates should be distinguished as scholars and scientists with demonstrated commitment to medical and graduate education.

Curriculum vitae and bibliography may be submitted to:

**M. K. King, M.D.
Dean**

**Washington University School of Medicine
660 South Euclid Avenue—Box 8106
St. Louis, MO 63110**

An Equal Opportunity/Affirmative Action Employer.

CYTOPATHOLOGIST—Position available in the Department of Pathology of The George Washington University Medical Center, Washington, D.C. Full-time faculty position as chief of cytopathology is available for individual with training and experience in anatomic pathology with expertise in cytopathology (including fine needle aspiration biopsy cytology). Candidate should be M.D. with Board certification. Teaching responsibilities involve medical students, residents and fellows. Rank will be determined based upon background and experience. Inquiries, curriculum vitae and bibliography should be sent to: **Dr. H. Sidransky, Chairman, Department of Pathology, The George Washington University Medical Center, 2300 Eye Street, NW, Washington, DC 20037.** *An Equal Opportunity Employer.*

POSITIONS OPEN

BOTANIST. The National Tropical Botanical Garden (formerly Pacific Tropical Botanical Garden), the only national, privately supported, tropical botanical garden chartered by the United States Congress, is seeking to fill a full-time position available immediately. A special Hawaiian Islands Plant Conservation Center is being created at the Garden's headquarters on Kauai with funds made available by the John D. and Catherine T. MacArthur Foundation. This will be a cooperative effort to establish a network of botanical gardens and research institutions in Hawaii. The successful candidate will coordinate efforts to establish this new center for the study and conservation of Hawaii's rare and endangered vascular plants and also develop and implement strategies for preserving these plants. A Ph.D. in a relevant field or equivalent experience is required. Experience working with Hawaiian plants is preferred. The ability to communicate well in writing and speaking and a knowledge of computers are advantageous. Salary is commensurate with experience. Initially this program will be supported by a 3-year grant from the MacArthur Foundation. Applicants should submit their curriculum vitae, description of research interests, and provide the names and addresses of three references by 31 March 1989 to: **Dr. William L. Theobald, Director, National Tropical Botanical Garden, P.O. Box 340, Lawai, Kauai, HI 96765.** *The National Tropical Botanical Garden is an Equal Opportunity Employer.*

DEVELOPMENTAL BIOLOGIST

The Division of Molecular, Cellular, and Developmental Biology of the Department of Biology at the University of California, Los Angeles, invites applications for a tenure-track position in Animal Developmental Biology. The appointment may be made at any rank, with preference for the assistant professor level.

We are looking for outstanding candidates with a record of creative and innovative research who have strong interests in, and imaginative approaches to, molecular and cellular aspects of animal development. Although the search is not limited to any one area, the Committee is particularly interested in candidates working in developmental neurobiology, pattern formation, cell-cell interactions, and developmental genetics. Responsibilities will include the teaching of an undergraduate upper division course on animal development.

Please send curriculum vitae, statement of research goals, and arrange for three letters of reference to be sent to:

**Dr. Allan J. Tobin
Chair, Developmental Biology Search Committee
Department of Biology
University of California, Los Angeles
Los Angeles, CA 90024-1606**

Closing date for applications is 31 March 1989.

The University of California is an Affirmative Action/Equal Opportunity Employer. We encourage applications from individuals of minority backgrounds and from women.

DIRECTOR OFFICE OF SPONSORED RESEARCH

Administrator needed to manage Rice University's sponsored research activities and assist with development of related policies and procedures. A minimum of 5 years of experience with sponsored research activities, a Ph.D., excellent writing and computer skills required. Ability to manage financial records essential. Send résumé, two letters of reference, and complete salary history postmarked no later than 15 March 1989 to: **J. Smith, Rice University, Employment Office, P.O. Box 2666, Houston, TX 77252. Telephone: 713-527-4074.** *Equal Opportunity Employer/Affirmative Action M/F/V/H.*

University of Minnesota is seeking one physician and molecular biologist for the **DIRECTOR OF THE GENETICS DIVISION** in the Department of Pediatrics with a joint appointment in the Institute of Human Genetics. Position will be a tenured associate or full professor depending upon years of experience and accomplishments. Approval of the Promotions Committee of the Department of Pediatrics and the Medical School is necessary. Board certification in medical genetics is required. Applications must be received by: 15 May 1989 with earliest start date: 1 July 1989. Send curriculum vitae to: **William G. Woods, Search Committee Chairperson, Box 454 UMHC, University of Minnesota, Minneapolis, MN 55455.** *The University of Minnesota is an Equal Opportunity Educator and Employer.*

POSITIONS OPEN

DIRECTOR, EPIDEMIOLOGY PROGRAM OFFICE

Epidemiology Program Office, Centers for Disease Control (CDC), Public Health Service, Department of Health and Human Services. Location: Atlanta, Georgia. Salary range: \$68,700 to \$76,400 per annum (plus an additional \$8,000 to \$20,000 per year for Federal Physicians Comparability Allowance if applicable.)

Duties and Responsibilities: CDC is searching for a scientist/administrator who will direct the activities of the Epidemiology Program Office. The Director, Epidemiology Program Office, manages an organization which: (i) serves as the focal point for the collection, analysis, and communication of basic surveillance information; (ii) plans, develops, and edits the Morbidity and Mortality Weekly Report and various surveillance reports; (iii) supports the training and development of epidemiologists by maintaining the Epidemic Intelligence Service through the recruitment, selection, training, assignment, and continuing education of epidemiologists; (iv) provides epidemiologic assistance and epidemic aid through the field assignment of epidemiologists; (v) provides assistance in analyzing the influence of various causal factors on the incidence, prevalence, and severity of preventable diseases; (vi) provides consultation on epidemiology and surveillance to other Centers and Offices of the CDC, other federal agencies, state and local health departments, international organizations (such as the World Health Organization and the Pan American Health Organization), and other nations. In carrying out the above functions, collaborates, as appropriate, with other Centers and Offices of the CDC. All applicants must have demonstrated the ability to perform successfully at the professional level in a health science or health-related area. All applicants must have had substantial professional experience involving the assessment and control of public health problems, including experience in planning, directing, and coordinating varied program responsibilities. Previous experience in broad-scale epidemiological activities at the local, state, national, or international level is highly desirable. Due to the leadership nature of this position, applicants possessing advanced degree or certification in applicable and relevant fields, such as a doctoral level degree, will receive priority consideration. Evaluation criteria will include evidence of leadership, scholarship, and administrative experience.

If interested, please submit a résumé to:

Lynn Austin Agin 404-639-3639
Employee Services and Compensation Branch
Personnel Management Office
Centers for Disease Control
1600 Clifton Road, N.E.
Atlanta, GA 30333

CDC is an Equal Opportunity Employer and maintains a smoke-free environment.

DIRECTOR, MATERIALS RESEARCH LABORATORY (MRL), Penn State:—The PSU-MRL is an intercollege/interdisciplinary research operation housed in a 60,000-square-foot facility. MRL research expenditures amounted to \$9.4 million in 1987/88 with 35% from industrial sources. More than 230 faculty, staff, and students are associated with MRL. A more detailed description of the director's qualifications will be sent upon request. Screening of applications will begin 15 March 1989, and applications will be accepted until the position is filled. Send letter of application, résumé and names of at least three references to: **Professor Russell Messier, Chair, Selection Committee, c/o Employment Division, Department S-007, Penn State University, 120 South Burrowes Street, University Park, PA 16801.** Professor Messier can be contacted by telephone: 814-865-3704 or FAX 814-865-2326. An Affirmative Action/Equal Opportunity Employer. Women and minorities encouraged to apply.

EUKARYOTIC GENETICIST—An entry-level, tenure-track position to begin August 1989. Ph.D. is required. Teaching responsibilities will include introductory genetics and upper-level courses in area of expertise. Development of an active research program and direction of graduate students are expected. Application deadline is 25 March 1989. Submit curriculum vitae and transcripts to: **Dr. James Stuart, Genetics Search Committee, Department of Biological Sciences, Murray State University, Murray, KY 42071.** MSU is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

POSITIONS OPEN



UNIVERSITÄT BERN

The Medical Faculty of the University of Berne, Switzerland, invites applications for the position of

DIRECTOR OF THE MAGNETIC RESONANCE UNIT

The emphasis is on development of MR-methodology and biomedical and clinical research, in collaboration with various departments and institutes of the Medical School. A comprehensive knowledge in MR-methodology and biological applications in imaging and spectroscopy is required. Academic appointment depends on the applicant's credentials. Knowledge of German is helpful but not a condition.

Applicants are asked to submit curriculum vitae, a list of publications and references to the following address:

Medizinisches Dekanat der Universität Bern
Murtenstrasse 11
3010 Bern, Switzerland

ECOLOGY SWARTHMORE COLLEGE

Applications are invited for a 1-year **LEAVE-REPLACEMENT POSITION** in the Department of Biology starting September 1989. The position involves teaching an intermediate-level course in ecology, an advanced-level seminar in plant or animal ecology, and participating in the Department's introductory biology course. Send curriculum vitae and three letters of recommendation to: **Chair, Ecology Search Committee, Department of Biology, Swarthmore College, Swarthmore, PA 19081.** Closing date for applications is 15 March 1989. Swarthmore College is an Equal Opportunity Employer.

FACULTY APPOINTMENT YALE UNIVERSITY SCHOOL OF MEDICINE

Applications are invited from Ph.D. or M.D. scientists for appointment as **ASSISTANT OR ASSOCIATE PROFESSOR** in the Department of Anesthesiology. Salary commensurate with experience and evidence of research excellence. Candidates with experience in biochemical pharmacology and/or molecular biology, as applied to cardiopulmonary function, will be of particular interest. Applications (by 1 April 1989), with complete curriculum vitae and bibliography, to:

C. Norman Gillis, Ph.D., Professor
Department of Anesthesiology,
Yale University School of Medicine
333 Cedar Street
New Haven, CT 06510

Yale University is an Affirmative Action Employer and provides Equal Opportunities to all applicants.

FACULTY POSITION WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

Applications are invited for a tenure-track position in the Division of Dermatology at Washington University School of Medicine. Applicants should hold an M.D. or M.D., Ph.D. degree with postdoctoral experience, and have completed an internship. It is expected that the applicant will have a demonstrable potential to develop an independent research program in areas of cellular and/or molecular biology. The successful candidate will also be expected to undertake clinical dermatology training with the ultimate goal of board certification and sharing the clinical teaching responsibilities on an equal basis with the existing faculty. New laboratory space, start-up support and the facilities of the department are available. Applicants should send curriculum vitae and a brief statement of research interests to: **Arthur Z. Eisen, M.D., Head, Division of Dermatology, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, MO 63110.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

FACULTY POSITION SUNY Stony Brook: The Department of Microbiology at SUNY Stony Brook invites applications for a tenure-track or tenured position at the level of assistant, associate, or full professor. The primary areas of recruitment interest are the molecular biology and genetics of eukaryotes. Preference will be given to candidates whose research relates to mechanisms of oncogenesis. Candidates must have an M.D. and/or Ph.D., postdoctoral experience and demonstrated productivity in basic research. Applicants should send curriculum vitae, a statement of research interests, and the names of three references to: **Search Committee 2, Department of Microbiology, SUNY Stony Brook, Stony Brook, NY 11794-8621.** SUNY Stony Brook is an Affirmative Action/Equal Opportunity Employer and Employer. AK 25

FACULTY POSITION ANATOMY, CELL AND MOLECULAR BIOLOGY

The Department of Anatomy and Cell Biology, SUNY Health Science Center at Brooklyn, New York, invites applications for several faculty positions in an actively growing department committed to expanding its faculty in the area of cellular, molecular, and neuro-biology. One of the positions available is for the directorship of a core facility in structural biology equipped with a Tracor-Northern digital image analysis system and scanning and transmission electron microscopes. Other positions require teaching in our medical school gross anatomy or histology/cell biology or neuroanatomy and participation in graduate school core curriculum. Excellent laboratory facilities, start-up funds and infra-structural support are available for modern biological work. We require a M.D. or Ph.D. degree with postdoctoral experience and demonstrated ability to develop an independent research program. Candidates with research interests in analysis of tissue-specific gene expression, molecular biology of muscle development and neuromuscular disorders, cell surface receptors and membrane channels or signal transduction mechanisms are encouraged to apply. Send curriculum vitae, a statement of research goals, and the names of three references to: **Dr. M. A. Q. Siddiqui, Professor and Chairman, Department of Anatomy and Cell Biology, SUNY Health Science Center at Brooklyn, 450 Clarkson Avenue, Box #5, Brooklyn, NY 11203.**

Equal Opportunity/Affirmative Action Employer. DMC #CR0250.

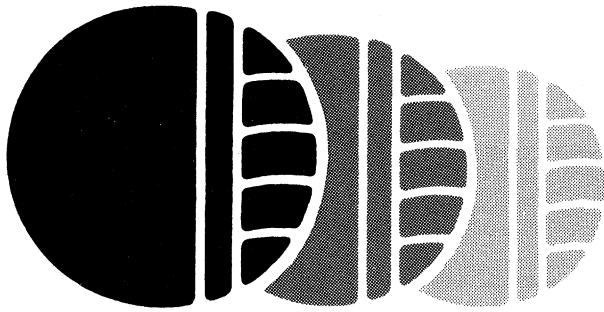
FACULTY POSITION: MEDICAL GENETICS

The Division of Medical Genetics, Department of Pediatrics, Harbor-UCLA invites applications from physician-scientists with strong research interests in either biochemical or molecular genetics. Candidates are expected to develop an active research program and must be Board-certified or Board-eligible in medical genetics. Salary and rank will be commensurate with experience.

Interested individuals should submit curriculum vitae and the names of three references to: **Dr. Adam J. Jonas, Division of Medical Genetics, Harbor-UCLA Medical Center, 1124 West Carson Street, Torrance, CA 90502.**

JEFFERSON INSTITUTE OF MOLECULAR MEDICINE FACULTY POSITIONS IN MOLECULAR BIOLOGY AND RELATED AREAS

The Jefferson Institute of Molecular Medicine of the Thomas Jefferson University is seeking two additional scientists to complete its complement of 18 new faculty members. All positions are tenure-track. Candidates will be selected primarily on the basis of their potential to establish outstanding research programs in molecular biology, molecular genetics, biochemistry and related areas. Successful candidates will be provided with competitive salaries, memberships in a graduate program, newly renovated laboratory space, start-up equipment grants, and some continuing support for their research programs. Send curriculum vitae and three letters of recommendation to: **Dr. Darwin J. Prockop, Director, Jefferson Institute of Molecular Medicine, Thomas Jefferson University, 11th and Walnut Streets, Philadelphia, PA 19107.** Equal Opportunity Employer.



ImmuLogic is a growing company dedicated to the creation of novel therapeutic and diagnostic products to modulate and monitor the human immune system. We employ state-of-the-art techniques and proprietary knowledge in immunology, biochemistry and molecular biology to develop products in the vaccine, allergy and autoimmune disease areas. We are currently adding to the outstanding scientific and management team at our **Cambridge, Massachusetts** headquarters, and assembling a superior staff for our new research facility in **Palo Alto, California**.

P A L O A L T O

SENIOR SCIENTIST/ GROUP LEADER

Molecular Biology

This individual will lead a group of researchers examining the mechanisms of autoimmune disorders and developing new therapeutic and diagnostic approaches. Strong leadership skills together with 8-10 years of postdoctoral experience with recombinant DNA technology as well as a clear record of significant accomplishment in an industrial or academic setting are required.

MOLECULAR BIOLOGIST

Individual will work independently and in collaboration with other researchers. 2-5 years' postdoctoral experience in the areas of gene cloning, sequencing, and expression, together with a strong interest in applying these skills toward research in the autoimmune disease area are required.

SENIOR SCIENTIST/ GROUP LEADER

Immunology

Candidate will lead a group of researchers exploring cellular reactions involved in autoimmune disorders and collaborating on the development of new therapeutic and diagnostic approaches. Strong leadership skills together with 7-10 years of postdoctoral experience in immunology as well as a clear record of significant accomplishment in an industrial or academic setting are required.

IMMUNOLOGIST

This individual will work independently and in collaboration with other researchers. 2-5 years' postdoctoral experience in the areas of molecular and cellular immunology or immunochemistry, together with a strong interest in applying these skills toward research in the autoimmune disease area are required.

RESEARCH ASSISTANTS/ ASSOCIATES

Individuals with technical experience will join our program teams. Experience in tissue culture and familiarity with basic laboratory techniques and assay systems are required for positions in immunology; experience with standard cloning and sequencing techniques is essential for positions in molecular biology. A minimum of a Bachelor's degree plus two years' relevant laboratory experience is also required.

For the above positions, please send *curriculum vitae* and list of publications and/or resume to: **ImmuLogic Pharmaceutical Corporation, 3330 Hillview Avenue, Palo Alto, CA 94304, Attn: Human Resources Department.**

C A M B R I D G E

MOLECULAR BIOLOGIST

This individual will join an established team of scientists seeking both to understand the role of the immune system in allergic reactions and to produce new therapies for important allergies. Extensive experience and a clear achievement record in the areas of gene cloning, sequencing and expression, as well as a Ph.D. in Molecular Biology with 2-5 years' additional postdoctoral experience are required.

CELLULAR IMMUNOLOGIST

This individual will play a key role in our human cellular studies aimed at understanding the role of the immune system in allergic reactions and designing improved therapies for allergic conditions. Extensive experience in cellular immunology with a background or strong interest in working with human T/B cells as well as a Ph.D. in Immunology plus 2-5 years' additional postdoctoral experience are required.

RESEARCH ASSISTANTS/ ASSOCIATES

Individuals with experience in cellular immunology or molecular biology will contribute to our research programs. Experience in tissue culture and familiarity with basic laboratory techniques and assay systems are required for positions in immunology; experience with standard cloning and sequencing techniques is essential for positions in molecular biology. A minimum of a Bachelor's degree plus two years' relevant laboratory experience is also required.

For the above positions, please send *curriculum vitae* and list of publications and/or resume to: **ImmuLogic Pharmaceutical Corporation, One Kendall Square, Building 600, Cambridge, MA 02139, Attn: Human Resources Department.**

ImmuLogic provides an outstanding working environment and state-of-the-art laboratory facilities. We have a first-rate support network of academic advisors and collaborators, an active Post-Doctoral program, and we support and encourage the publication of important research findings. **ImmuLogic** offers competitive salaries and benefits as well as equity participation through an incentive stock option program.

IMMULOGIC 
Pharmaceutical Corporation

Equal Opportunity Employer



UNIVERSITY OF CALIFORNIA
DAVIS

**Katherine Esau
Endowed Chair
In Plant Biology**

Applications are invited for the Katherine Esau Chair in Plant Biology. This 11-month, tenured position carries the titles of Professor and Plant Scientist in the Agricultural Experiment Station, with choice of departmental affiliation in Agronomy and Range Science, Botany or Vegetable Crops; other affiliations may evolve in connection with reorganization of the Division of Biological Sciences. The Chair will have at his/her disposal income from the endowment for the support of research and other scholarly activities. The University will provide additional funds for laboratory remodeling and for equipment.

Applicants should hold a Ph.D. or the equivalent degree and should have distinguished records of research, basic or applied, in organismal biology of plants, and of teaching at graduate and undergraduate levels. The Davis campus considers this position to be an important component in the further strengthening of its plant biology faculty and is committed to the appointment of a candidate of exceptional ability. The holder of this Chair will be expected to enrich the academic life of the campus through scholarly activities, seminars and broad interaction with students and faculty.

This position will remain open until filled. To assure fullest consideration, applicants should send their curriculum vitae, a statement of teaching and research interests, a list of publications, reprints of selected publications, and names and addresses of three references by April 1, 1989, to:

Lawrence Rappaport, Chair
Katherine Esau Chair Search and Review Committee
Dean's Office, Division of Biological Sciences
University of California, Davis, CA 95616
(916) 752-6764

The University of California is an affirmative action/equal opportunity employer

FACULTY POSITION—

**HIV VIROLOGIST/MOLECULAR BIOLOGIST
ST. JUDE CHILDREN'S RESEARCH HOSPITAL**

The Department of Virology and Molecular Biology at St. Jude Children's Research Hospital has a position available at the junior or senior level for an individual with research interests in the molecular biology and pathogenesis of human immunodeficiency virus (HIV). Candidates should have a Ph.D., M.D., or veterinary degree with research accomplishments that reflect an ability to maintain an independent program. We are seeking to complement our clinical program on AIDS and add to our current research programs which include studies of the replication and pathogenesis of influenza and paramyxoviruses, iridoviruses, adenoviruses and EBV.

The 17-member Department of Virology and Molecular Biology is part of St. Jude's multidisciplinary staff of 120 faculty and 60 postdoctoral fellows engaged in both clinical and basic research. The positions, which are well supported by institutional resources, offer opportunities for collaborative research with members of the Immunology, Tumor Cell Biology, Biochemistry, and Pharmacology Departments, as well as with members of the clinical staff.

The Institution has Core facilities for the synthesis of oligonucleotides and peptides, for peptide and DNA sequencing, a hybridoma facility, an electron microscope facility, two shared flow cytometers, a molecular modeling/molecular biology computer facility, and a state-of-the-art animal resource center. A new basic research building will provide over 200,000 square feet of laboratory space.

Candidates should send a curriculum vitae, including a brief research prospectus, and names of three references to: Dr. Robert G. Webster, Chairman, Search Committee, Department of Virology and Molecular Biology, St. Jude Children's Research Hospital, P.O. Box 318, Memphis, TN 38101-0318.

Equal Opportunity/Affirmative Action Employer

Cardiovascular Scientist

Parke-Davis Pharmaceutical Research Division, Warner-Lambert Company, has an immediate opening for a Scientist in cardiovascular research at their Pharmaceutical Research Facility in Ann Arbor, Michigan. The qualified candidate will perform experiments on non-human primates, summarize and report data as well as assist in the development of protocols.

Qualified applicants should possess the following:

- BS/MS in biological sciences
- Background in handling laboratory animals, dosing and husbandry
- Expertise in measurement of cardiovascular parameters, with 2-5 years' experience
- Experience utilizing laboratory computers desirable

Employment will be at our modern facilities adjacent to The University of Michigan campus. We offer excellent compensation and benefits. Interested, qualified applicants should send curriculum vitae and salary requirements in confidence to: Ms. S. Hultquist, Human Resources Representative, PARKE-DAVIS, 2800 Plymouth Road, Ann Arbor, MI 48105.

PARKE-DAVIS

DIVISION OF WARNER-LAMBERT COMPANY

"Equal Opportunity in Action"

Professor and Program Director Medical Laboratory Science Northeastern University

Responsibilities: Serve as principal academic administrator for personnel associated with the A.S., B.S., M.S. and Ph.D. degree programs. Responsible for faculty recruitment and development, curriculum design and implementation, stimulation and expansion of research activities, didactic and clinical components, development and preparation of the budget. Serve on the College Administrative Committee, and participate in college-wide planning and decision making. Teach in your area of expertise. Actively participate in scholarly research endeavors.

Qualifications: Doctoral degree in appropriate scientific discipline. Certified medical technologist, categorical certification in area of specialization or eligible for certification. Clinical laboratory and academic teaching experience, as well as demonstrated research ability, is essential. Familiarity with academic, professional, regulatory, and scholarly activities influencing academic programs in medical technology desired. Qualify for senior academic rank (Associate or Full Professor).

Salary Range: Commensurate with qualifications and experience.

Please send resumes no later than March 16, 1989 to: Daniel H. Fisher, Ph.D., C (ASCP), College of Pharmacy and Allied Health Professions, 206 Mugar Building, Northeastern University, Boston, MA 02115. Phone: (617) 437-3664. Northeastern is an Equal Opportunity/Affirmative Action, Title IX University.



Pharmacia

Pharmacia Genetic Engineering Inc.

GENE EXPRESSION-MOLECULAR BIOLOGY Inflammation/Virology/Autoimmunity

Pharmacia Genetic Engineering Inc., —Phage— went into operation less than 2 years ago and is already poised to play a key role in Pharmacia's quest to offer to its customers, a new generation of tomorrow's health care products. The company comprises a fine team of highly qualified staff (current total, 26 individuals). Phage maintains laboratories at the Torrey Pines Center—in the midst of an environment which exhibits one of the strongest life science growth areas in the United States. We are now expanding our laboratories and are looking for

RESEARCH SCIENTISTS: PHD LEVEL

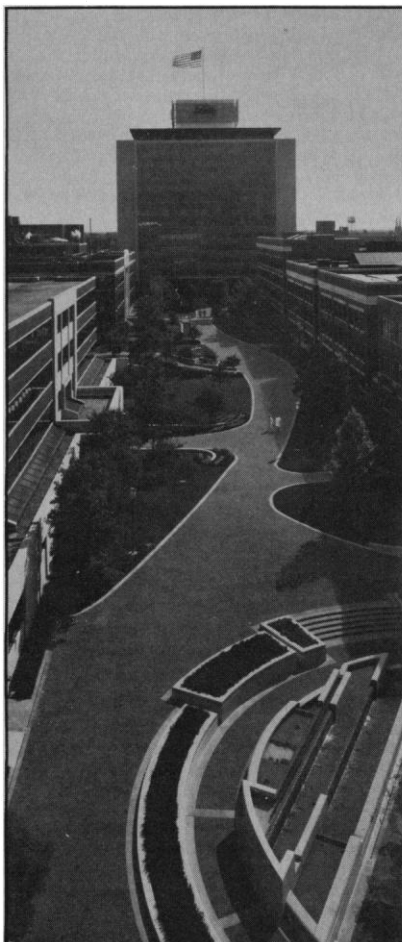
The qualified applicant must have

- Documented skills in applied molecular biology (gene cloning, analysis, expression—yeast expression of particular interest), preferably through industrial experience.
- Specific expertise in one or several fields, including autoimmunity/cancer/inflammation/virology
- The spirit of a team player
- The desire to become part of a group of achievers

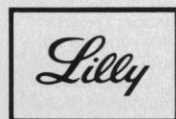
Phage combines the excitement of a start up with the necessary back up by Pharmacia, with its full-fledged R&D, production and marketing organization.

If your interests and expertise meets with our needs, we should get together and tell you more... Please send your CV, including three references for us to contact, to Pharmacia Genetic Engineering Inc., Attn. Torsten B. Helting, P.O. Box 8827, La Jolla, CA 92038. Confidentiality is guaranteed.

—We are an equal opportunity employer—



BS/MS SCIENTISTS Molecular Biology Research



Equal Opportunity Employer

For more than a century, scientists at ELI LILLY AND COMPANY have developed innovative, high quality pharmaceutical products. In 1988, Lilly invested over \$500 million in research-and-development programs. More than 3,000 scientists at the company's Lilly Research Laboratories are pursuing creative research programs that involve many important health care needs.

To further build its research capabilities, Lilly is seeking self-motivated, innovative scientists for several positions in the Molecular and Cell Biology Division. The ideal candidates will have the following qualifications:

- Bachelor's degree with experience or Master's degree in molecular biology or a related discipline.
- Essential experience includes recombinant DNA techniques such as DNA purification, plasmid construction, nucleic acid transfer and hybridization.
- In addition, experience in one of the following areas is desirable: protein/enzyme assay and purification techniques including HPLC, column chromatography and polyacrylamide gel electrophoresis; mammalian genetics, cell culture and small animal handling; and/or prokaryotic genetics.

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

For prompt consideration, please forward your *résumé* to:

Maria L. Poor
Science Recruitment (AMB-2)
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285

POSITIONS OPEN

FACULTY POSITIONS— CELL BIOLOGISTS, NEUROSCIENTISTS

Applications are invited for appointments to tenure-track positions, at rank depending on qualifications, in the Anatomy Division of the Department of Biomedical Sciences, Creighton University, Omaha. Research on "Regulatory Peptides," including receptor interactions and mechanisms of signal transduction, is a major focus of the Department and appointees will have the opportunity to avail of the facilities of the Regulatory Peptide Center and of the collaboration of colleagues in the Divisions of Physiology and Biochemistry. Teaching in anatomy will include courses on histology or neuroanatomy. Starting date is 1 August 1989 or later by agreement.

Application, curriculum vitae and addresses of referees should be sent to:

**The Chairman
Department of Biomedical Sciences
School of Medicine
Creighton University
2500 California Street
Omaha, NE 68178**

Creighton University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITIONS DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY THE PHILADELPHIA COLLEGE OF PHARMACY AND SCIENCE

Two, full-time, tenure-track positions are available in the Department of Pharmacology and Toxicology. Appointments may be at the level of assistant or associate professor and are available 1 July 1989. Responsibilities will include development of an extramurally funded research program and instruction of graduate and undergraduate students in pharmacology and toxicology. Requirements for the positions are a Ph.D. degree in pharmacology, toxicology or related field and at least 2 years of postdoctoral training. Individuals with expertise in the areas of molecular and cellular pharmacology or toxicology are particularly encouraged to apply.

To be considered, submit a letter of interest, curriculum vitae, and a list of three professional references by 31 March 1989 to:

**Chairperson, Faculty Search Committee
Department of Pharmacology and Toxicology
The Philadelphia College of
Pharmacy and Science
Woodland Avenue at 43rd Street
Philadelphia, PA 19104**

An Equal Opportunity/Affirmative Action Employer.

FACULTY RESEARCH ASSISTANT

Two positions, B.S./M.S., on project investigating oyster populations in Maryland Chesapeake Bay. Field and small boat handling experience and S.C.U.B.A. certification required. For more senior position, experience in data entry and technical writing required. Background in fishery science, population dynamics, and statistics desirable. Submit résumé to: **Dr. Brian Rothschild, Chesapeake Biological Laboratory, University of Maryland System, P.O. Box 38, Solomons, MD 20688** by 10 March 1989. *University of Maryland System is an Affirmative Action/Equal Employment Opportunity Employer.*

HUMAN CYTOGENETICS

The University of Medicine and Dentistry of New Jersey/School of Osteopathic Medicine (UMDNJ-SOM), Division of Human Genetics, Department of Pediatrics invites applications for a tenure-track position as Director of the Clinical Cytogenetics Laboratory. Board-certified by the American Board of Medical Genetics and capability to develop a creative research program in cytogenetics required. Send curriculum vitae, list of publications, representative reprints, and statement of research interest to: **Michael K. McCormack, Ph.D., Professor and Chief, Division of Human Genetics, UMDNJ-SOM, 401 Haddon Avenue, Camden, NJ 08103.** The UMDNJ is an Affirmative Action/Equal Opportunity Employer, M/F/H/V.

POSITIONS OPEN

HEAD DEPARTMENT OF NUTRITION AND FOOD SCIENCES THE UNIVERSITY OF TENNESSEE KNOXVILLE

Earned doctorate; established record of research and teaching; and demonstrated administrative experience and skills required. Experience or knowledge across areas represented in department desirable: nutrition, food science, public health nutrition, hotel and restaurant administration, food systems administration. Oversee the daily management of the department, including department resource allocation responsibility for College and Agricultural Experiment Station funding. Facilitate program direction and curriculum development. Foster faculty research and teaching. Facilitate the development of proposals for outside funding. Opportunities for continued involvement in research and occasional teaching.

Send a letter of application, the names of three references, and curriculum vitae to: **Jacky DeJonge, 110 Jessie Harris Building, The University of Tennessee, Knoxville, TN 37996-1900.** The search committee will begin screening applications on 1 April 1989, and the search will continue until the position is filled. *UTK is an Equal Employment Opportunity/Affirmative Action/Title IX/Section 504 Employer.*

IMMUNOLOGIST CLINICAL LABORATORY SCIENCES

The Department of Health Sciences invites applications from individuals for a tenured/tenure-track faculty position in the University of Wisconsin, Milwaukee (UWM) Clinical Laboratory Sciences program to teach in undergraduate and graduate programs and supervise thesis research. Candidates must have a Ph.D. in immunology or related area, and a strong commitment to establish a vigorous independent research program. Candidates will be expected to develop a vigorous independent research program. Individuals with clinical laboratory experience and certification in a clinical area are encouraged to apply. Salary and rank dependent on qualifications. Curriculum vitae, statement of research interests and the names of three references should be sent by 15 March 1989 to: **David L. Amrani, Ph.D., Chair, Search and Screen Committee, School of Allied Health Professions, University of Wisconsin-Milwaukee, P.O. Box 413, Milwaukee, WI 53301.** *UWM is an Equal Opportunity/Affirmative Action Employer.*

IMMUNOLOGIST, MOLECULAR AND CELLULAR BIOLOGY GRADUATE PROGRAM of the Department of Biological Sciences, University of Maryland Baltimore County, invites applications for a tenure-track position. The successful applicant will be expected to develop a vigorous independent research program and to participate in graduate and undergraduate teaching. The Department is very well equipped for research and includes state-of-the-art instrumentation including a cell sorter facility. Excellent laboratory and start-up funds are available. Applicants should have a Ph.D./M.D. degree, a minimum of 2 years of postdoctoral experience, and a significant record of publications. Please submit curriculum vitae, statement of research interests, and the names of three references to: **Dr. S. Ostrand-Rosenberg, Department of Biological Sciences, UMBC, Baltimore, MD 21228.** *UMBC is an Equal Opportunity Employer.*

LECTURER EQUIVALENT TO ASSISTANT PROFESSOR COMMUNITY ECOLOGY/CONSERVATION BIOLOGY. One-year temporary position. Ph.D. is required and university teaching experience is preferred. Candidates must have expertise in community ecology and/or conservation biology. Demonstrated interest in wildlife management and in manipulated populations preferred. Candidates with a strong background in mathematics, professional wildlife experience, and/or with an understanding of consumptive use of wildlife will be given preference. Demonstrated research experience in the appropriate specialties is essential. Applicants should submit curriculum vitae (including reprints), transcripts of academic work, and three letters of reference to: **Dr. Richard L. Ridenhour, Dean, College of Natural Resources, Humboldt State University, Arcata, CA 95521.** Telephone: 707-826-3561. Closing date is 30 March 1989. *Humboldt State University is an Equal Opportunity/Affirmative Action Title IX Employer.*

POSITIONS OPEN

HEAD DEPARTMENT OF EPIDEMIOLOGY AND COMMUNITY HEALTH

The School of Veterinary Medicine invites applications and nominations for the position of Head, Department of Epidemiology and Community Health. The Department is one of six in the School and is responsible for presentation of material in biometrics, data processing, avian medicine, epidemiology, preventive medicine, and food quality control to professional students. Graduate students may enroll in either master's or doctoral programs that currently emphasize analytic and clinical epidemiology, avian medicine, and preventive health medicine. Faculty in this department are actively engaged in cooperative teaching, research and service activities.

Position requirements include a D.V.M. or equivalent degree and demonstrated accomplishments in research and teaching or service. Preference given to candidates with additional academic training to include the M.P.H., M.P.V.M. or similar degrees or, especially, the Ph.D. The successful candidate should have demonstrated leadership abilities and should be eligible for the academic position of Professor and membership on the graduate faculty. This is a full-time, tenure-track fiscal year appointment available 1 July 1989. Salary and date of appointment are negotiable.

Applicants should submit a full résumé and the names of three references by 15 April 1989 to:

**Dr. Charles R. Short, Chair
ECH Head Search Committee
School of Veterinary Medicine
Louisiana State University
Baton Rouge, LA 70803**

LSU is an Equal Opportunity Employer.

MEDICAL ONCOLOGIST/HEMATOLOGIST: Molecular Biologist. Division of Hematology/Oncology, Department of Medicine, University of California, San Diego, seeks M.D. or M.D./Ph.D. with excellent laboratory background in molecular biology for a tenure-track position at assistant or associate professor level. Must be Board-certified/Board-eligible in hematology and/or oncology, have California license or eligible to apply, and show strong promise for extramural grant support. Demonstrated research and strong publication record required for associate level. Position will be 75%-80% laboratory, 20%-25% clinical. Laboratory space in UCSD Cancer Center building adjacent to UCSD Medical Center. Salary related to rank and step of appointment within the established salary schedule of the UCSD School of Medicine. Reply by 31 March 1989 to: **Mark R. Green, M.D., UCSD Cancer Center, H-811K, 225 Dickinson Street, San Diego, CA 92103.** *Affirmative Action/Equal Opportunity Employer.*

MOLECULAR GENETICIST FACULTY POSITION

Assistant professor, tenure-track appointment starting as early as August 1989, for Ph.D. molecular geneticist working with prokaryotes. Postdoctoral experience required. Responsibilities include teaching molecular genetics/biotechniques and major participation in an established biotechnologist training program. The individual selected will be expected to establish and maintain a strong externally funded research program.

The Biology Department has 25 faculty and offers B.S. and M.S. degrees emphasizing environmental or molecular biology/biotechnology. The biotechnology program is receiving exceptional support from the State. The Department has well-equipped laboratories for recombinant DNA and hybridoma research and training and encourages collaboration with Ph.D. granting basic science departments in the School of Medicine.

Salary for the academic year is nationally competitive. Applicants should provide a letter of application, curriculum vitae, summary of research interests, official transcripts, relevant publications and the name and address of three references. Screening of applications will begin 15 March 1989, however, applications will be accepted until the position is filled. Address correspondence to: **Dr. Wendall E. Allen, Department of Biology, East Carolina University, Greenville, NC 27858-4353.** *East Carolina University is an Affirmative Action/Equal Opportunity Employer and as such encourages applications from women, blacks and other minorities. Federal law requires proper documentation of identity and employability at time of employment.*

**Griffith University
Brisbane
AUSTRALIAN ENVIRONMENTAL STUDIES
CHAIR
IN
QUANTITATIVE METHODS AND MODELLING**

Applications are invited for appointment to a Chair in Environmental Studies in the area of Quantitative Methods and Modelling, preferably in Ecology, Griffith University, Brisbane, Australia.

Australian Environmental Studies was established as a foundation teaching and research school to promote study on the impact of human society on the environment. The primary concern of the Division is with problems in environmental science, policy and management in Australia. The Division has adopted an interdisciplinary framework which involves some 40 faculty staff in problem-centred teaching and research which encourages the use of a team approach. Currently, teaching and research in the Division is organised around the specific areas of Ecology; Environmental Management; Impact and Policy; Environmental Pollution and Health; Resource Use and Planning; and Quantitative Methods including Applicable Mathematics, Computing and Statistics. The staff of the Division also have extensive involvement in international and regional environmental research programmes and activities. The teaching programmes of the Division include undergraduate, honours, coursework masters and research degrees.

The University is seeking an outstanding scholar with proven abilities in the use and application of Quantitative Methods (mathematics, statistics or computing) in Modelling. Preference will be given to applicants with quantitative skills applied to plant ecology or other areas of ecology. The successful candidate will be expected to provide strong, academic leadership in teaching and research in a problem-solving interdisciplinary framework, to participate in the development of Environmental Studies and the administration of the Division.

The professorial salary is presently \$63,397 per annum. The University will assist with the cost of fares, removal expenses and housing. The successful applicant will be required to join the Superannuation Scheme for Australian Universities.

Applications should be submitted by 10 March 1989, and interested applicants should first write to the Secretary, Senior Selection Committee.

**Griffith University
Nathan Qld 4111
Australia**

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ASSOCIATE SCIENTIST

The Drug Metabolism Department of Hoffmann-La Roche is expanding, and is seeking a degreed Associate Scientist to assist in the isolation, characterization and quantification of novel peptide/protein drugs in clinical samples.

To qualify, you must have a BS or a MS in Chemistry, Biochemistry, Immunology or a related field, along with 3-5 years of relevant experience. In return, we offer a generous salary and benefits package, along with the professional advantages of joining a world-renowned, state-of-the-art industry leader. For consideration, please send your resume to: **Frances Newman, Department DMS, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.** We are an equal opportunity employer.



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Research Opportunity in Japan

The Frontier Research Program of RIKEN Institute of Physical and Chemical Research invites applications for postdoctoral positions of the following areas:

- molecular biology on immune system and protein chemistry (purification and analysis of proteins) including expression of cloned genes and characterization of gene products at the **Laboratory for Molecular Regulation of Aging** headed by **Dr. Gabriel GACHELIN**.
- molecular biology on tumor suppressor genes, protein chemistry including characterization of proteins from Alzheimer's disease patient brain, and biochemistry and molecular cell biology including eukaryotic cell at proliferation and differentiation at the **Laboratory for the Aging Process** headed by **Dr. Koiti TITANI**.
- molecular biology on phytochrome, including immunocytochemistry, isolation and analysis of genomic clones *in vivo* footprint analysis and site-directed mutagenetics at the **Laboratory for Plant Biological Regulation** headed by **Professor Masaki FURUYA**.
- nonlinear optics of organic materials, characterization and device application and organic molecular beam epitaxy technique at the **Laboratory for Nonlinear Optics and Advanced Materials** headed by **Professor Anthony F. GARITO**.
- protein design and synthesis, and bioelectronics at the **Laboratory for the Bioelectronic Materials** headed by **Dr. Kevin M. ULMER**.

Appointment will be initially for one year and may be renewable thereafter.

These Laboratories are located in RIKEN Institute's two establishments in Wako, Saitama and Tsukuba, Ibaraki, outskirts of Tokyo.

Candidates should send a detailed curriculum vitae, a list of publications, names of two individuals who may be contacted for reference and summary of research interests to

Director, Division of the Frontier Research Program, RIKEN, Wako, Saitama, Japan Zip code 351-01



Frontier Research Program, RIKEN

Research Associates

Praxis Biologics, a recognized leader in the development of pediatric vaccines, is seeking the talents of highly-motivated individuals to join our progressive research team.

Join our active research program in the development and characterization of new vaccines. State-of-the-art technologies include protein purification, peptide synthesis, bioanalytical and immunochemical analyses, and immunoassay development.

These positions require a BS in Biology, Immunology, Chemistry, or Biochemistry, or equivalent, plus at least 2 years' experience in a research laboratory environment.

Our research laboratories are located in Rochester, NY, a city that offers an excellent quality of life and a family-oriented community. Some of New York State's most attractive educational, cultural, and recreational resources are within easy reach. We offer a competitive salary and benefits package. For prompt consideration, please forward your resume and letter to:

Praxis Biologics, Inc., Human Resources Department, 300 East River Road, Rochester, NY 14623.

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Wayne State University

FACULTY POSITIONS IN PHARMACOLOGY/TOXICOLOGY

**Wayne State University
College of Pharmacy and Allied Health Professions
Department of Pharmaceutical Sciences**

The Department of Pharmaceutical Sciences is seeking candidates for tenure track positions available immediately in pharmacology/toxicology. Areas of special interest include, but are not limited to: neuropharmacology/toxicology, behavioral pharmacology/toxicology, immunopharmacology/toxicology, connective tissue pharmacology, and pulmonary pharmacology/toxicology. Persons with demonstrated expertise in applied biotechnology are especially urged to apply. Candidates will be expected to establish an active graduate research program in their respective areas and vigorously pursue extramural the support of such programs. Teaching at both the graduate and undergraduate levels is expected. Applicants should possess a Ph.D. degree in pharmacology, toxicology, immunology, or related disciplines and have postdoctoral experience. Eligibility is limited to U.S. citizens and permanent residents. Rank and salary commensurate with experience.

Interested persons should send a curriculum vitae, a description of research interests, and the names of three references to:

**Dr. Hanley Abramson, Chair
Department of Pharmaceutical Sciences
College of Pharmacy and Allied Health Professions
Room 528 Shapero Hall
Wayne State University
Detroit, MI 48202**

Wayne State University is an Affirmative Action/Equal Opportunity Employer. Minorities and women are encouraged to apply.

Pharmacologist (Japan)

Position is located in the new Pharmaceutical Research Center of BAYER AG near KYOTO/OSAKA, Japan. This person will conduct research and pharmacological sciences including elucidation of mechanism of action of new drugs. The candidate will evaluate the physiological effects, determine the pharmacokinetics, and demonstrate the absence of adverse physiological effects of cardiovascular ethical pharmaceutical products.

Requires M.D. or Ph.D with a background in pharmacology, physiology, or related field with exposure to cardiovascular pharmacology. We require a person with Japanese language capabilities who wishes to permanently relocate to Japan.

For initial evaluation please send your curriculum vitae or call **Dr. W.F. Schaeffler, 2200 Powell St., Suite 720, Emeryville, CA 94608. (415) 653-3156.**



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Clinical Scientist

Pharmaceutical Research

Parke-Davis, Pharmaceutical Research Division, Warner-Lambert Company, a respected leader in drug discovery and development, has immediate openings for Clinical Scientists to join its Worldwide Clinical Development teams in the areas of Central Nervous System and Lipid Research.

Central Nervous System

The successful candidate will have responsibility for the planning and implementation of clinical development programs involving new psychoactive agents. This will include program and protocol design, liaison with field investigators, initiation and monitoring of clinical studies, preparation of reports for submission to regulatory agencies in the U.S. and abroad, and support of new products through appropriate publications.

Qualified candidates will have a Ph.D. in a scientific discipline or a Pharm.D.; approximately 6 years' experience in central nervous system clinical research, domestically and/or internationally is required.

Lipid Research

The successful candidate will have responsibility for the planning and implementation of clinical development programs involving lipid-regulating agents. This will include program and protocol design, liaison with field investigators, initiation and monitoring of clinical studies, preparation of reports for submission to regulatory agencies in the U.S., and support of new products through appropriate publications.

Qualified candidates will have a Ph.D. in a scientific discipline or a Pharm.D., MS or equivalent in a relevant discipline with a minimum of 3 years' clinical research experience; approximately 6 years' experience in clinical research.

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 an excellent living and working environment.

Interested candidates should forward curriculum vitae and salary requirements to: Mr. R. Gaskin, Human Resources, PARKE-DAVIS, 2800 Plymouth Road, Ann Arbor, MI 48105.

PARKE-DAVIS

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Pharmaceutical Development Scientists

Triton Biosciences Inc. is a fully integrated pharmaceutical and diagnostics company focused on product development opportunities in the areas of cancer and other life-threatening diseases. This entrepreneurial subsidiary of Shell Oil Company is seeking goal-oriented researchers with experience in the pharmaceutical industry to help create high-quality products that fill critical medical needs. Current opportunities include:

Pharmaceutical Formulations

Will develop pharmaceutical formulations and dosage forms for therapeutic proteins. In addition, will develop drug delivery systems for proteins and assess them in animal models. Requires PhD in Biochemistry, Physical Chemistry, Pharmaceutical Chemistry, or related field, plus 2-5 years' experience in pharmaceutical formulation R&D. Industrial experience developing dosage forms and bioanalytical methods desired. Refer to Box ZS-01.

Protein Purification

Will assist in developing methods and processes to purify and characterize recombinant therapeutic proteins. Requires PhD in Protein Chemistry, Biochemistry, or related field, and experience in the purification and characterization of proteins. Industrial experience in large-scale isolation and familiarity with cGMPs is preferred. Refer to Box ZS-02.

Bioanalytical Chemist

Will develop sensitive physiochemical assays for proteins in support of process and product development activities. Will perform bioanalytical method development, HPLC, electrophoresis, IEF, peptide mapping, N- and C-terminal sequencing, immunochemical methods, spectroscopy, and other protein characterization methods. Requires PhD in Analytical Chemistry or Biochemistry with 3-5 years' biotechnology experience in above areas. Refer to Box ZS-03.

Triton offers competitive salaries and benefits, including relocation assistance. For consideration, send CV. with salary history and references to: Triton Biosciences Inc., 1501 Harbor Bay Parkway, Alameda, CA 94501. An Equal Opportunity Employer.



Triton Biosciences Inc

POSITIONS OPEN

MOLECULAR BIOLOGIST

An assistant or associate professorship is available in the Department of Physiology, Boston University School of Medicine. Candidates should have significant research accomplishments in molecular/cellular physiology with skills in molecular genetic techniques. Previous teaching experience is desirable.

Applicants should send curriculum vitae, description of research interests and names and addresses of three referees to:

Dr. Benjamin Kaminer
Department of Physiology
Boston University School of Medicine
80 East Concord Street
Boston, MA 02118

Applications to be sent preferably by 30 April 1989. Boston University is an Equal Opportunity/Affirmative Action Employer.

MOLECULAR ONCOLOGIST/RETROVIROLOGIST

At least 5 years of experience in constructing, cloning, and sequencing genomic and cDNA libraries. Experience in RNA analysis as applied to oncogene discovery and retrovirus molecular biology. Must have expertise in avian and mammalian cell culture, transfection, transformation, viral infection, propagation of retroviruses and retroviral vectors. A proven record of publication in international scientific journals and excellent verbal communication skills are necessary for the position. Salary commensurate with experience. Send résumé and evidence of qualifications to:

Bionetics Research Inc.
Basic Research Program
NCI-FCRF Box B Building 428
Attention: Personnel Administrator
Frederick, MD 21701

Equal Opportunity Employer M/F/H/V.

MOLECULAR TUMOR BIOLOGY

A POSTDOCTORAL/RESEARCH ASSOCIATE POSITION is available immediately for candidate with background in one or more of the following areas: Molecular biology, genetic engineering, radiation biology, biochemistry, virology or immunology. Candidate will participate in research on the molecular basis of radiation-resistant human cancers with special focus on PCR-based evaluation and comparison of the oncogene sequence(s) in normal vs. tumor cells. Please send curriculum vitae to: **Dr. Anatoly Dritschilo, Professor and Chairman, Department of Radiation Medicine, The Vincent T. Lombardi Cancer Research Center, Georgetown University Medical Center, 3800 Reservoir Road, N.W., Washington, DC 20007.** Equal Opportunity/Affirmative Action Employer.

NEMATODE TAXONOMIST/SYSTEMATIST/MORPHOLOGIST: Available 1 July 1989, an 11-month, tenure-track position as assistant professor and assistant nematologist in the Agricultural Experiment Station. Research, teaching, and student advising responsibilities in the areas of nematode taxonomy, morphology, and systematics. The research may be conducted at the biochemical, molecular, cellular, and whole animal level, and will include the application of biochemical, molecular, physiological, and morphological approaches to taxonomic questions. A Ph.D. degree with a broad training in taxonomic sciences and experience in nematode taxonomy/morphology, are required, with a record of research productivity. Application deadline: 15 May 1989. Send curriculum vitae, statement of research and teaching interests relative to applying expertise in nematology, official undergraduate and graduate transcripts, reprints of relevant publications and submitted manuscripts, names and addresses of at least three references to: **Dr. Howard Ferris, Search Committee Chair, Department of Nematology, University of California, Davis, CA 95616. Telephone: 916-752-6905.** The University of California, Davis, is an Equal Opportunity/Affirmative Action Employer with a strong institutional commitment to the achievement of diversity among its faculty and staff. In that spirit, we are particularly interested in receiving applications from persons of under-represented groups including women, ethnic minorities, disabled veterans, Vietnamese veterans, and handicapped persons.

POSITIONS OPEN

NEUROSCIENCE RESEARCH ASSOCIATE—

Immediate opening for postdoctoral research associate to participate in studies of the neurophysiological and neuropharmacological bases of synaptic plasticity in the spinal cord, using single cell recording and receptor binding techniques. Please send curriculum vitae and name and addresses of three references to: **Dr. Lillian M. Pubols, Robert S. Dow Neurological Sciences Institute, Good Samaritan Hospital and Medical Center, 1120 N.W. Twentieth Avenue, Portland, OR 97209.**

NEUROSCIENCES FACULTY POSITION UCR/UCLA PROGRAM IN BIOMEDICAL SCIENCES

The University of California, Riverside/University of California, Los Angeles (UCR/UCLA) Program in Biomedical Sciences, which offers an accelerated M.D. curriculum jointly between the University of California, Riverside (UCR), and the University of California, Los Angeles (UCLA), School of Medicine, has a tenure-track faculty opening in the Division of Biomedical Sciences at UCR available 1 July 1989. The prospective level of appointment for candidates who must possess the Ph.D. or M.D. degree may be at the assistant, associate or full professor. Primary teaching responsibilities will be in a 10-week course in neurosciences taught to 24 first-year medical students. Prior medical school teaching experience is strongly preferred. Also the successful candidate should actively participate in graduate student training. Junior applicants should have postdoctoral research experience, should be able to develop a strong independent research program and must possess a strong commitment to teaching. Senior applicants should have a clearly demonstrable record of research productivity, success in obtaining extramural funding and demonstrated teaching effectiveness. We would particularly welcome applications from individuals with research expertise in cellular or molecular neurobiology. The University of California is an Affirmative Action/Equal Opportunity Employer. The deadline for applications and nominations is 13 March 1989. Applicants should send curriculum vitae, bibliography, two to three representative reprints, a statement of present and future research goals, and the name of three references.

Mary Ann Baker, Chair
Neurosciences Search Committee
Division of Biomedical Sciences
University of California, Riverside
Riverside, CA 92521-0121

PETROLOGIST: Tenure-track faculty position beginning August 1989 at assistant professor rank. Completed Ph.D. required. Teaching capability in introductory mineralogy and petrology, and one or more of the following: geologic mapping and field methods, geochemistry, economic geology, or structural geology. Active research program in specialty; available equipment includes a MAC-5 electron microprobe. Indiana University-Purdue University at Indianapolis (IUPUI) is an urban university with 25,000 students. Send résumé by 1 April 1989 to: **Dr. Arthur Mirsky, Chairman, Department of Geology, IUPUI, 425 Agnes Street, Indianapolis, IN 46202.** Affirmative Action/Equal Opportunity Employer.

POPULATION BIOLOGIST

The Department of Biological Sciences, University of Nevada, Las Vegas, invites applications for a tenure-track position at assistant or associate professor rank. We seek candidates who use experimental approaches to population problems or who work at the interface of theoretical and empirical disciplines. The successful candidate will be expected to conduct a vigorous research program and to demonstrate a strong commitment to both undergraduate and graduate (M.S. and Ph.D.) education. Ph.D. in a biological science required; position pending state budgetary approval. Send curriculum vitae, a brief description of research and teaching interests, reprints of representative publications and three letters of reference to: **Dr. Joseph R. McAuliffe, Chair, Population Biologist Search, Department of Biological Sciences, University of Nevada, Las Vegas, Las Vegas, NV 89154** by 15 March 1989.

UNLV is an Equal Opportunity/Affirmative Action Employer and employs only U.S. citizens and aliens authorized to work in the United States.

POSITIONS OPEN

PHARMACOLOGIST

Applications are invited for a full-time position available July 1989 comprising both teaching and research opportunities. Candidates should have a Ph.D. in pharmacology and expertise in physiology. Candidates should possess a strong commitment to teaching and research. Send curriculum vitae to:

Douglas H. Poorman, Ph.D.
Vice President of Academic Affairs
Southern College of Optometry
1245 Madison Avenue
Memphis, TN 38104

Equal Opportunity Employer.

POSTDOCTORAL training in biophysics at Rush University (three positions). Study the gating of voltage-dependent ion channels in neurons using single channel analysis with **Dr. F. Quandt**. Or, study membrane proteins and intracellular calcium movements in single cells of skeletal and cardiac muscle, using electrical and optical techniques with **Dr. E. Rios**. Send a résumé to: **Dr. F. Quandt or Dr. E. Rios, Department of Physiology, Rush University, 1750 West Harrison Street, Chicago, IL 60612. Telephone: 312-942-6454.**

POSTDOCTORAL FELLOW to study cytokine (interleukin-1) regulation of the hypothalamic-pituitary axis after burn injury. Experience in small animal surgery, RIA, ELISA or HPLC required. Knowledge of molecular biology or tissue culture techniques helpful. Joint appointment at Shriners Burns Institute, Massachusetts General Hospital and Harvard Medical School. Résumé to: **Hans Bode, M.D., 51 Blossom Street, Boston, MA 02124.** Equal Opportunity Employer.

POSTDOCTORAL FELLOW: Position available at the National Institute on Alcohol Abuse and Alcoholism, for studies of basic mechanisms of receptor-effector coupling and neuropeptide actions in brain, and the effects of alcohol on these processes. Candidates should have a strong biochemical and/or pharmacological background, working knowledge of basic molecular biological techniques, and some postdoctoral experience. Salary is commensurate with training and experience. Only U.S. citizens or permanent residents are eligible for this position. NIH is an Equal Opportunity Employer.

Send curriculum vitae and three letters of recommendation to:

Dr. P. Hoffman
NIH, Building 10, Room 3C103
9000 Rockville Pike
Bethesda, MD 20892
Telephone: 301-443-5800

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE. Cellular and molecular studies of the regulation of beta-galactoside specific lectin expression during postnatal lung development, using cell and organ cultures. Position available 1 June 1989 for 2 years. Salary at the NIH postdoctoral level. Send curriculum vitae and three references to: **Gary L. Sanford, Ph.D., Biochemistry Department, Morehouse School of Medicine, 720 Westview Drive, S.W., Atlanta, GA 30310.**

POSTDOCTORAL FELLOWSHIP

In molecular biology of genes expressed in connective tissues with special emphasis on mutations that produce genetic diseases. Opportunities will be provided to learn current recombinant DNA technologies, and to develop new ones. Applicants must have Ph.D. in biochemistry or related areas. Salary competitive. Apply and send letters of recommendation to: **D. J. Prockop, Jefferson Institute of Molecular Medicine, Department of Biochemistry, Thomas Jefferson University, 1020 Locust Street, Philadelphia, PA 19107.** Equal Opportunity Employer.

POSTDOCTORAL POSITION: A postdoctoral position is available for the study of murine B lymphocyte activation and differentiation. Investigation will focus on the role of B cell membrane Ig, lymphokines and cognate B cell-T cell interactions in the induction of antibody secretion in vivo. Applicants should have cellular immunology experience. Send curriculum vitae and names of three referees to: **Dr. Fred Finkelman, c/o Civilian Personnel, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814-4799.** USUHS is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately in molecular biology/immunology to study pathogenic mechanisms of Simian Immunodeficiency Viruses (SIV) in nonhuman primates under the direction of **Dr. Jonathan S. Allan**. Our AIDS program is comprised of five investigators currently funded in immune mechanisms, vaccine development, chemotherapeutics, pathogenesis, and molecular biology. Southwest Foundation is a nonprofit biomedical research facility supported, in part, by NIH funded research and has available various nonhuman primates for AIDS studies. Postdoctoral salaries range up from \$21,070, considering prior relevant, postdoctoral experience. Candidates should have an M.D., D.V.M. and/or Ph.D. and training in molecular biology or immunology. Interested individuals should send curriculum vitae with names and telephone numbers of three references to: **Personnel Director (6), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284. Equal Opportunity Employer M/F.**

POSTDOCTORAL POSITION—Molecular biology and biochemistry of hormone receptors. Send résumé and request that three recommendations be sent to: **Dr. Gerald Litwack, Fels Institute for Cancer Research and Molecular Biology, Temple University School of Medicine, 3401 North Broad Street, Philadelphia, PA 19140. An Equal Opportunity Employer.**

POSTDOCTORAL POSITION available starting July 1989 to study the structure, function, and regulation of the proton pumps involved in receptor-mediated endocytosis and intracellular membrane traffic. Experience in membrane protein chemistry or molecular biology desirable. Send curriculum vitae, reprints and three letters of reference to: **Dr. Michael Forgac, Department of Physiology, Tufts University School of Medicine, 136 Harrison Avenue, Boston, MA 02111.**

POSTDOCTORAL POSITION

The Dana-Farber Cancer Institute is seeking to fill a research position at the postdoctoral level in the Division of Cancer Pharmacology. Candidate will study the regulation by hormonal and environmental factors of mammalian P-450 enzymes active in the oxidation of cholesterol, steroid hormones, and xenobiotics using molecular and cellular approaches. Experience in molecular biology, cell biology or endocrinology highly desirable. Joint appointment will be held in the Department of Biological Chemistry and Molecular Pharmacology at Harvard Medical School. Start date is flexible. Send curriculum vitae, copies of representative publications, and names of three references, to: **Dr. David J. Waxman, JF-525, Dana-Farber Cancer Institute, Harvard Medical School, 44 Binney Street, Boston, MA 02115. An Equal Opportunity Employer.**

POSTDOCTORAL POSITION MOLECULAR NEUROBIOLOGY

A postdoctoral position is available to analyze the molecular characteristics of cell surface glycoproteins and their role in intercellular communication in the nervous system. Projects concern the interaction of contactin [*J. Cell Biol* 107,1561-1573 (1988)] with extracellular and intracellular ligands and the molecular analysis, expression and role of molecules isolated in association with contactin. Candidates with expertise in biochemistry, molecular biology, cell-, developmental-, or neurobiology may reply. The La Jolla Cancer Research Foundation is located within the scientific community of San Diego.

To apply please submit curriculum vitae, statement of research interests, and two letters of recommendation to: **Dr. Barbara Ranscht, La Jolla Cancer Research Foundation, 10901 North Torrey Pines Road, La Jolla, CA 92037.**

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POSTDOCTORAL POSITIONS IN MOLECULAR BIOLOGY are available for studies of genes controlling blood pressure in genetically hypertensive rats, and for genetic studies on the renin-angiotensin system. Some experience in biochemistry is desirable. Applicants must have a Ph.D., M.D., D.V.M., or equivalent degrees and be citizens or permanent residents of U.S. Send curriculum vitae to: **Dr. John Rapp, Department of Medicine, Medical College of Ohio, P.O. Box 10008, Toledo, OH 43699. Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITION available for membrane transport studies and studies on structure-function analysis of a membrane transport protein. Requires expertise in protein biochemistry and molecular biology. Salary negotiable, commensurate with experience. Send letter of application, curriculum vitae, and three references to: **Dr. Ada Elgavish, Department of Pharmacology, University of Alabama School of Medicine, Birmingham, AL 35294. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available immediately to study the biosynthesis and regulation of aflatoxin using a genetic transformation system developed for *Aspergillus flavus*. Background in molecular biology, genetics or biochemistry required. Please send curriculum vitae, and three letters of reference to: **Dr. Gary A. Payne, Department of Plant Pathology, Box 7616, North Carolina State University, Raleigh, NC 27695-7616. Telephone: 919-737-2735.**

POSITIONS OPEN

POSTDOCTORAL POSITION/RESEARCH ASSOCIATE. To examine the role of Protein Kinase C in mediating the growth and differentiation of hematopoietic cells. Studies will focus on the control of transcription by the interaction of PK-C with the *jun* oncogene. Please send curriculum vitae and names of three references to: **Dr. A. Kraft, Division of Hematology/Oncology, University of Alabama at Birmingham, 513G THT, 1900 University Boulevard, Birmingham, AL 35294.**

POSTDOCTORAL RESEARCH. A 5-year position for research on glial-axonal relationships, using morphological and biochemical technologies. Ideal backgrounds include: (i) electron microscopy, especially morphometric and cytochemical skills, or (ii) membrane biochemistry. Send inquiries, curriculum vitae, and references to: **Richard Wiggins, Ph.D., Chairman, Anatomy Department, 4052 HSN, WVU Health Science Center, Morgantown, WV 26506. An Equal Opportunity/Affirmative Action Employer.**

NMR and Protein Engineering

Du Pont's Central Research and Development Department has immediate openings for BS/MS scientists, postdoctoral fellows, and PhD Principal Investigators. Outstanding individuals are invited to apply in the following areas:

BIOLOGICAL NMR Principal Investigator. Requires experience in spectral assignment and structure elucidation of proteins and/or nucleic acids using multi-dimensional NMR methods. Candidates interested in development of new spectroscopic methods are encouraged to apply. The successful candidate will join a team of spectroscopists and biophysical chemists that staff our new bioNMR facility which houses a Bruker AM600 spectrometer and local workstations tied to a large VAX-cluster and Cray XMP supercomputer.

PROTEIN ENGINEERING All levels. Requires experience in cloning, mutagenesis, protein scale-up and purification, and physical and enzymatic characterization of natural and mutant proteins. Experience in molecular graphics, x-ray crystallography, high-field NMR and/or calorimetry is also highly desirable. The successful candidate(s) will join a team of biophysical chemists dedicated to studying the structure, dynamics, and interactions of proteins, protein folding, *de novo* protein design, and the interaction of proteins with ligands and nucleic acids.

RAS-p21 PROTEIN BS/MS Level Scientist and Postdoctoral Fellow. Candidate will join a new program to study the structure/function relationship of the ras gene products. Normal and mutant ras-p21 proteins will be studied using biochemical and biophysical methods to investigate the structural basis for ras-p21 involvement in human cancer. Requires experience in one of more of the following areas: protein purification, enzymology and/or biological spectroscopy (fluorescence, CD, NMR).

Existing groups in Molecular Biology include X-ray Crystallography, Macromolecular Computation, Biological NMR, Enzyme Mechanisms, Virology, Cell Biology, Molecular Genetics, Recombination, and Gene Expression. The Department possesses state-of-the-art instrumentation for all forms of spectroscopy, peptide and DNR synthesis, protein sequencing, genetics, enzymology/kinetics, modern molecular biology, and synthetic chemistry.

At Du Pont you'll find a stimulating scientific environment in a modern research facility located near Wilmington, DE. Our Mid-Atlantic location offers a wide range of academic, cultural and recreational activities. We provide excellent compensation, benefits, and relocation assistance. Qualified candidates should send a curriculum vitae with three references to: **Dr. Stephen L. Brenner, c/o Professional Staffing Section, Employee Relations Department, Room X-51570, Du Pont Company, Wilmington, DE 19898**



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POSITIONS OPEN

POSTDOCTORAL POSITION IN DRUG DELIVERY. Research areas include delivery systems for peptide/protein drugs, mechanism of drug transport in polymers, and swelling kinetics in glassy hydrogels. Ph.D. in chemistry, biochemistry, or chemical engineering preferred. Send résumé and three references to: **Professor P. I. Lee, Faculty of Pharmacy, University of Toronto, Ontario M5S 2S2, Canada.** In accordance with Canadian Immigration requirements, priority in the first instance will be given to Canadian citizens and landed immigrants. In accordance with the Employment Equity Policy of the University of Toronto, applications are invited from qualified women as well as qualified men.

POSTDOCTORAL POSITION IN MICROBIAL GENETICS: Available immediately to determine methods of asexual variation in the genus *Trichoderma*. In these fungi, we have found that asexual hybridization gives rise to instability and dramatic alteration in phenotype in the absence of the parasexual cycle. The successful candidate will be required to have a Ph.D. and to be skilled in standard molecular techniques. He/she has the opportunity to describe novel mechanisms of genetic change. The starting salary is \$25,000 per year. Send curriculum vitae, transcripts, and three letters of reference to: **G. E. Harman, Department of Horticultural Sciences, Cornell University, Geneva, NY 14456.**

POSTDOCTORAL POSITIONS (two) available immediately for 2 years (with possibility for renewal) to study cellular and molecular aspects of Alzheimer's disease and aging. Strong background in cell biology, regulation of gene expression, molecular biological techniques, or protein processing is required. Salary \$21,000 to \$30,000. Send curriculum vitae and names of three referees to: **Dr. Dmitry Goldgaber, Department of Psychiatry, Health Science Center, T-10, SUNY at Stony Brook, Stony Brook, NY 11794-8101.** SUNY/Stony Brook is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS IN IMMUNOLOGY. Two positions are available to study: (i) antigen presentation and T cell recognition of human class I histocompatibility antigens, using molecules that have been mutagenized at defined positions; (ii) the use of human class I histocompatibility antigens as alloantigens and as restricting elements in human class I-transgenic mice. T cell receptor gene usage in these mice will also be determined. Experience in molecular biology and/or cellular immunology is desirable. Please send curriculum vitae and names of three references to:

Dr. Victor H. Engelhard
Department of Microbiology
University of Virginia Medical School
Charlottesville, VA 22908
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POSTDOCTORAL RESEARCH ASSOCIATE positions are available in the Department of Neuropathology and Department of Psychiatry, Program in Behavioral Genetics. Applicants with M.D. or Ph.D. degree, preferably with experience in molecular biology and gene regulation, should apply. Projects include the understanding of gene expression in glial lines, molecular events associated with vascular changes in animals with experimental allergic encephalitis and genetic basis of inherited/psychiatric disorders. Send curriculum vitae and names of three references to: **Herbert Lachman, M.D., Department of Medicine, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, NY 10461.** An Equal Opportunity Employer.

PROFESSOR AND ASSOCIATE DEAN, School of Health Related Professions. Position open 1 July 1989. Earned doctorate, established research and external grant record, appointment in exercise science, medicine and nuclear medicine techniques, nutrition, occupational or physical therapy. Responsible for undergraduate and graduate programs and to enhance research productivity and national visibility. Ten-month academic appointment with summer administrative duties. Submit by 7 April 1989 résumé and three letters of reference to: **Search Committee, c/o Dean's Office, School of HRP, 435 Kimball Tower, State University of New York at Buffalo, Buffalo, NY 14214.** Affirmative Action/Equal Opportunity.

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

Ph.D. to work on study investigating aspects of oyster population dynamics. Experience in the design and interpretation of field programs, in field operations, and technical writing is required. Background in population dynamics and statistics preferable. Submit résumé to: **Dr. Brian Rothschild, Chesapeake Biological Laboratory, University of Maryland Systems, P.O. Box 38, Solomons, MD 20688** by 10 March 1989. University of Maryland System is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL/RESEARCH ASSOCIATE—GENE EXPRESSION

Available immediately to investigate molecular mechanisms of regulated secretions. We are studying gene expression, segregation and sorting of salivary proteins, i.e., histatins and proline-rich proteins. Candidates must have Ph.D. and experience in recombinant DNA methods. Send curriculum vitae and three letters of recommendation to: **Dr. Frank Oppenheim, Room G-217B, Department of Oral Biology/Biochemistry, Boston University Medical Center, 100 East Newton Street, Boston, MA 02118.**

The Center for Bioanalytical Research (CBAR), University of Kansas, has openings for **POSTDOCTORAL RESEARCHERS** in areas related to biospecific reagents, bioseparations, and instrumentation. Ph.D. in analytical chemistry, pharmaceutical chemistry, biochemistry, or closely-related field required. Experience in HPLC, spectroscopy, analytical instrumentation and/or electrochemistry desirable with background in biochemistry helpful. Salary: \$18,000 to 22,000 per year. Applicants should send curriculum vitae and three letters of recommendation to: **Karl Schorno, CBAR, 2095 Constant Avenue, Lawrence, KS 66046.** Affirmative Action/Equal Opportunity Employer.

DANA-FARBER CANCER INSTITUTE HARVARD MEDICAL SCHOOL PROFESSOR OF PATHOLOGY

Dana-Farber Cancer Institute (DFCI) and Harvard Medical School are seeking a Professor of Pathology with a primary research interest in the role of protein phosphorylation in the development of neoplastic transformation. The candidate should be a distinguished investigator, and will become a member of the new Division of Cell and Molecular Biology at the DFCI. The successful candidate will be expected to carry out a strong basic science research program, and participate in the teaching of medical and graduate students in the fields of cell and molecular biology. Harvard University is committed to increasing representation of women and minority members among its faculty and particularly encourages applications from such candidates. Candidates should send curriculum vitae, statement of research interests, and names of three references to: **Karin E. Wetmore, Office for Faculty Affairs, Harvard Medical School, 25 Shattuck Street, A-302, Boston, MA 02115.**

Harvard Medical School and Dana-Farber Cancer Institute are Affirmative Action/Equal Opportunity Employers.

National Science Foundation (NSF). NSF's Division of Astronomical Sciences is seeking qualified applicants for the position of **PROGRAM DIRECTOR**, Extragalactic Astronomy Program. This position will be filled on a 1- or 2-year rotator/temporary basis starting July 1989.

Normally, the rotator candidate receives a leave of absence from his/her employer and salary ranges from \$48,592 to \$75,473. Applicants must have a Ph.D. in astronomy or astrophysics or equivalent experience. In addition, 6 or more years of scientific research experience beyond the Ph.D. and a record of productive research is required. Program Directors are responsible for the review, recommendation and processing of proposals for grants in astronomy research and budget preparation. For technical information, please contact: **Morris Aizenman, Division of Astronomical Sciences, Telephone: 202-357-7643.**

Applicants should send résumé or SF-171, Application for Federal Employment to: **National Science Foundation, Division of Personnel and Management, 1800 G Street, N.W., Washington, DC 20550.** Attention: Catherine Handle. For further information call 202-357-9529. Hearing-impaired individuals should call: TDD: 202-357-7492. NSF is an Equal Opportunity Employer.

POSITIONS OPEN

HARVARD MEDICAL SCHOOL DEPARTMENT OF RHEUMATOLOGY AND IMMUNOLOGY PROFESSOR OF MEDICINE

Harvard Medical School seeks an M.D. or Ph.D. investigator studying the cellular and molecular biology of the lymphocyte, to appoint to the newly-created tenured Professorship of Medicine in the Department of Rheumatology and Immunology of the Brigham and Women's Hospital. The successful candidate should be an excellent scientist and recognized leader, who is also committed to research collaborations, and to training medical and graduate students and fellows. Substantial laboratory space and core research facilities are available in the HMS quadrangle. Clinical research may be conducted at the adjacent Brigham and Women's Hospital.

Please reply with curriculum vitae and statement of research interests to: **Dr. K. Frank Austen, Chairman, Department of Rheumatology and Immunology, Harvard Medical School, Seeley G. Mudd Building 604, 250 Longwood Avenue, Boston, MA 02115, or Karin E. Wetmore, Office for Faculty Affairs, Harvard Medical School, 25 Shattuck Street, A-302, Boston, MA 02115.**

Harvard Medical School is an Affirmative Action/Equal Opportunity Employer. Women and minority candidates are encouraged to reply.

REPRODUCTIVE GENETICS

The Division of Reproductive Genetics, Department of Obstetrics and Gynecology at the University of Tennessee, Memphis/University Physicians Foundation, Inc. has an opening at the **INSTRUCTOR** level beginning 1 July 1989. Applicants should desire a career in academic medicine. Must be board-certified or eligible by the American Board of Obstetrics and Gynecology and the American Board of Medical Genetics.

This position will involve participation in all of the clinical services, including the Prenatal Clinics, Maternal Serum Alpha-fetoprotein Screening Program and Consultation services. In addition, there will be teaching responsibilities to medical students, house officers and fellows with particular emphasis to the education and career development of the fellows in the Division. The Fellowship Program emphasizes laboratory training and research in cytogenetics, DNA analyses, inborn errors of metabolism, immunogenetics, and population genetics. The individual will also be responsible for general duties in obstetrics and gynecology.

Applicants should send curriculum vitae to:

Sherman Elias, M.D.
Director, Division of Reproductive Genetics
University of Tennessee, Memphis
University Physicians Foundation, Inc.
853 Jefferson Avenue, Room E102
Memphis, TN 38163

The University of Tennessee, Memphis is an Equal Employment Opportunity/Affirmative Action/Title IX/Section 504 Employer.

RESEARCH ASSISTANT PROFESSOR

The Cardiology Division, University of Colorado Health Sciences Center, seeks a Ph.D. with postdoctoral experience for application and development of molecular biology techniques of endothelial and smooth muscle cell cultures. Would join federally and intramurally supported studies of endothelial cell modulation of vascular reactivity and atherogenesis. Write: **L. D. Horwitz, M.D., Box B130, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, CO 80262.** We are an Equal Opportunity Employer.

RESEARCH ASSOCIATE

Opportunity to join a research team working on molecular basis of action of retinoic acid on carcinogenesis. Experience in recombinant DNA technology and cell biology is required. Ph.D. in biochemistry, molecular biology, or related field. Send résumé and three reference letters to:

Dr. A. K. Verma
University of Wisconsin
Clinical Cancer Center
K4/532
600 Highland Avenue
Madison, WI 53792

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You will join our molecular pharmacology group and develop in-vitro assays to screen natural products for novel pharmacological agents. Requires an effective communicator with a PhD in Pharmacology, Molecular Biology or Biochemistry and 0-3 years' post-doctoral experience in a related area. Ideally you will be an expert in biochemistry, signal transduction or molecular pharmacology of receptors.

Senior Scientist—Animal Tumor Models

Assists in the study of solid tumors in animal models and evaluates anti-tumor compounds. A PhD and 0-3 years' experience are required. Background in development of transgenic mice preferred.

Senior Scientist—Molecular Biology

Establish and implement a program involving control of oncogene expression at the transcriptional and post-transcriptional levels. A PhD and 0-3 years' experience in mammalian gene regulation are required.

Senior Scientist—Cell Biology/Biochemistry

Define targets for anti-tumor drug intervention and develop drug screening programs. A PhD and 0-3 years' experience in biochemical purifications and knowledge of oncogene biology are essential.

Associate/Assistant Scientist—Molecular Biology/Cell Biology

Strengthen your experience in recombinant DNA techniques. These positions, which require a BS/MS, will allow you to contribute to research on the mechanism of oncogene action.

Assistant Scientist

Requires research experience with enzymology, receptor assay or ELISA, as well as a BS in Biochemistry or related field.

At Schering-Plough, you'll receive all the support and recognition you need to pursue your best ideas. In addition to outstanding resources and an exciting research environment, we offer an attractive salary and benefits package. For immediate, confidential consideration, forward your resume and salary history to: Mr. Louis DeMartino, Schering-Plough Research, 60 Orange Street, Bloomfield, NJ 07003. We are an equal opportunity employer.

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Molecular Genetics Research Assistants

As part of our expanding research activities, we seek several innovative scientists to join our Molecular Genetics Department at the Central Research facility in Groton, Connecticut. These positions offer an opportunity to join a group of highly motivated scientists carrying out basic research and developing biotechnology applications for the advancement of our drug discovery and medicinal research programs.

Candidates should have a BS or MS degree in a biological science with 1-2 years of relevant laboratory research experience involving recombinant DNA techniques. In addition, you should have experience in one or more of the following:

- Analysis of gene expression
- cDNA library screening
- Mammalian cell culture
- Protein purification
- Construction of expression vectors
- DNA sequencing

In addition to a stimulating scientific environment, we offer a competitive compensation/benefits package and relocation assistance to an attractive southeastern Connecticut shore community. Qualified applicants should submit their resume and the names of three references, in confidence, to: Mrs. Lorraine C. Corr, Personnel Associate, Pfizer Central Research, Eastern Point Road, Groton, CT 06340. An equal opportunity employer.



Retrovirologist

Board Certified in Internal Medicine and Board Eligible in Clinical Oncology. Research experience with human retroviruses and human herpes virus required.

Applicants must be U.S. Citizens. The VA offers competitive salaries and excellent fringe benefits. Interested candidates please send resume to:



Susan Zolla-Pazner, Ph.D.
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Drug Metabolism Senior Research Scientist

We are seeking an individual to join our metabolite elucidation group who will be responsible for the separation and identification of drug metabolites from animal and human studies.

Candidates must have a Ph.D. and a strong background in biochemistry/bioanalytical chemistry (HPLC, GC), including quantitative methods development, and should be able to interpret NMR and mass spectra. Experience in the use of stable and radioisotopes for *in vitro* and *in vivo* metabolism studies is essential. Must be experienced in the use of animals for metabolism studies, and with the isolation and identification of drug metabolites from biological fluids and tissues. A working knowledge of pharmacokinetics is desirable. Should also have excellent oral and written communication and interpersonal skills.

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ASSISTANT PROFESSOR OF PHARMACOLOGY & TOXICOLOGY

University of Medicine and Dentistry of New Jersey-New Jersey Medical School (UMDNJ-NJMS), Department of Pharmacology & Toxicology has a tenure-track opening for an Assistant Professor of Pharmacology. Candidates must have a Doctoral degree, with Predoctoral training in Pharmacology and a strong capacity for independent research which has a high probability of attracting external financial support. Some teaching experience is desirable since the position requires participation in all teaching programs of the Department including programs for Medical, Dental and Graduate students. The Newark campus of the University is located on a modern, 50-acre new campus and is in close proximity to a wide variety of desirable living styles. Many opportunities are available in the geographic area for academic and scientific interactions.

Send curriculum vitae including the names of three references to: **Dr. George A. Condouris, Professor & Chairman, Department of Pharmacology & Toxicology, UMDNJ-New Jersey Medical School, (S), 185 South Orange Avenue, Newark, NJ 07103-2757. Deadline for applications is April 15, 1989.**

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Research Associate position available starting July, 1989 at Bascom Palmer Eye Institute, Department of Ophthalmology, University of Miami School of Medicine, Miami, Florida, to study molecular aspects of human genetic ocular diseases. Recombinant DNA techniques are primarily used to study retinitis pigmentosa, gyrate atrophy and retinoblastoma. Applicant should have Ph.D./M.D. Experience in molecular biology preferred but not required. Send curriculum vitae and names, addresses and telephone numbers of three references to: **Dr. George Inana, National Institutes of Health, Building 6, Room 232, Bethesda, MD 20892.** University of Miami is an Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE

Ph.D. or M.D. Cellular and molecular mechanisms of lung injury: Macrophages, cell culture, growth factors, fibrogenesis. Experience with molecular biology and oncogenes is desirable. Competitive salary commensurate with experience. Available 1 April 1989, or thereafter. Contact: **Gerald L. Bartlett, M.D., Ph.D., Chair, Department of Pathology, University of Illinois College of Medicine at Peoria, P.O. Box 1649, Peoria, IL 61656.** An Equal Opportunity Employer.

RESEARCH ASSOCIATE for Medical Facility in N.E. Ohio—perform research in the area of lithium transport in the blood of children and adolescents with hypertension. Use statistics and laboratory methods to evaluate these measures. Analyze blood samples, read blood reports; compare and determine standards and levels of hypertension; determine lithium levels in blood. Requires M.D. or equivalent as evaluated by foreign credentials service and 1 year of experience in duties described or 6 months as intern analyzing blood samples plus 6 months academic research in lithium therapy. 40 hours per week, 9 a.m. to 6 p.m. \$23,000 per year. Qualified applicants reply immediately with résumé to: **R. Lechler, JO #1084416, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

POSITIONS OPEN

RESEARCH ASSOCIATE, DUKE UNIVERSITY MEDICAL CENTER

Position available for a Ph.D.-level physicist, biomedical engineer, or image processing scientist. Contribute to ongoing research projects in nuclear medicine instrumentation, with emphasis on single photon emission computed tomography (SPECT). Knowledge of reconstruction tomography, mathematical modeling, digital image processing, or scintillation detectors desirable, but not required. The successful candidate will be responsible for developing and evaluating improved SPECT imaging approaches. Send curriculum vitae, a sample reprint if available, and a brief summary of research experience and goals to: **R. J. Jaszcak, Ph.D., Duke University Medical Center, Department of Radiology/Nuclear Medicine Section, P.O. Box 3949, Durham, NC 27710.**

THE JOHNS HOPKINS UNIVERSITY DEPARTMENT OF BIOLOGY SENIOR FACULTY APPOINTMENT IN BIOPHYSICAL CHEMISTRY

Applications are invited for a senior faculty appointment in the Biology Department at The Johns Hopkins University. The interests of the faculty encompass a broad scope of biology including biochemistry, biophysics, molecular, cell, and developmental biology. The department has a long tradition in physical biochemistry with interests in the structure and function of interacting macromolecules.

Enquiries should include a statement of scientific interests and curriculum vitae. *Johns Hopkins is an Equal Opportunity Employer.*

Write to:

Dr. Ludwig Brand
Chairman Search Committee
(Biophysical Chemist)
The Johns Hopkins University
34th and Charles Streets
Baltimore, MD 21218

POSITIONS OPEN

RICE UNIVERSITY RESEARCH ASSOCIATE

The Department of Biochemistry announces the availability of a research associate position in the area of metalloprotein structure and function. Previous experience in one of the following areas is desirable: Purification and/or characterization of membrane-bound enzymes, mitochondrial electron, transport proteins, biophysical techniques. Interested individuals should send a complete résumé, together with the names of three people who are willing to provide references for the applicant.

All information should be sent immediately to: **G. Palmer, Biochemistry Department, Rice University, P.O. Box 1892, Houston, TX 77251.** Rice University is an Equal Opportunity Employer.

SOIL CHEMIST / GEOCHEMIST / ENVIRONMENTAL SCIENTIST/ECOLOGIST. Participate in a unique interdisciplinary program to improve environmental monitoring and assessment techniques. Provide guidance to the quality assurance components of acid rain and hazardous waste studies. Take a lead role in developing a center of environmental quality assurance to conduct research for improving the integrity of environmental data and to train scientists and graduate students in quality assurance procedures. Experience in environmental programs, modeling, and quality assurance is desired. Requires a Ph.D. in soil chemistry, geochemistry, ecology, or a related area, or the equivalent in experience, a basic understanding of environmental contaminant fate and transport, and an interest in environmental QA. Salary commensurate with education and experience.

Send résumé, transcripts, and the names of three references by 1 April 1989 to: **Dr. Delbert Barth, Director, Environmental Research Center, University of Nevada, Las Vegas, 4505 South Maryland Parkway, Las Vegas, NV 89154.**

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

RESEARCH SCIENTIST/ Genome Analysis

GIBCO/BRL a division of Life Technologies, Inc., a leader in the development of reagents for Molecular Biology research, has an immediate opening for a Ph.D. level research scientist in its Genome Analysis Technology Group.

The selected candidate will plan and perform basic research projects, leading to new, state-of-the-art products that will facilitate large scale mapping and sequencing of the human genome.

Requirements for the position are a Ph.D. degree, post doctoral experience and demonstrated record of accomplishment in the field of eucaryotic molecular biology. Experience with recombinant DNA, sequencing or genomic mapping are particularly desirable. Effective communication skills and the ability to work in an interdisciplinary research environment are essential.

We offer a competitive salary and benefit program including health, dental, life, pension and 401K plans. Qualified applicants should send resumes or C.V. to:

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Protein Biochemists



Continued expansion of the Pfizer Central Research Molecular Genetics Research Department has created employment opportunities for protein and nucleic acid biochemists. The research activities of this Department are focused on highly collaborative and multidisciplinary investigations of the underlying mechanisms of human diseases and the search for novel therapeutic entities. Positions are opening for individuals with expertise in the following areas:

Synthetic Peptide Chemistry - Responsibilities will include the synthesis, isolation and characterization of biologically active peptides and proteins and analogues of important mediators of biological processes.

Protein Biochemistry - Major responsibility will be the application of quantitative 2-D protein gel technology to the investigation of the mechanism of action of novel drugs and to the identification of important new biological mediators.

Protein Isolation and Characterization - Responsibilities include the development of a microtechniques lab for the isolation and characterization of small quantities of unknown proteins and peptides.

Physical Biochemistry - Major responsibility will be the physical, chemical and spectroscopic characterization of synthetic and recombinant proteins and peptides.

These positions require a PhD in a relevant field with a minimum of two years of postdoctoral training and a record of achievement documented by publications. More senior applicants and those having industrial research experience are also encouraged to apply.

These positions offer excellent opportunities for professional recognition and growth. We also offer competitive compensation, benefit package and the opportunity to live in an attractive Connecticut shore community. Please send resume and description of research accomplishments to: Dr. Jerry K. Larson, Assistant Director, Employee Resources, Pfizer Central Research, Eastern Point Road, Groton, CT 06340. An equal opportunity employer.

EXECUTIVE DIRECTOR QUATERNARY SCIENCES CENTER, DESERT RESEARCH INSTITUTE UNIVERSITY OF NEVADA SYSTEM

The Quaternary Sciences Center of the Desert Research Institute is seeking an Executive Director of national reputation to provide administrative and scholarly leadership for its expanding basic and applied research programs in Anthropology, Archaeology, History, Paleobotany, Paleozoology and Quaternary Geology. The Center has an agenda to expand its research into improving understanding of global environmental change in arid environments. The successful applicant must have demonstrated the administrative and interpersonal skills required to foster the productivity and creativity of a small group of research scientists and to be an effective advocate for the Center. Applicants should have significant research achievements in the Quaternary sciences. Experience in archaeology is desired and a Ph.D. is preferred. Salary is state-funded in the \$75,000 to \$80,000 range negotiable commensurate with applicant's qualifications and experience.

The Desert Research Institute is the statewide research division of the University of Nevada System. Research is managed in five centers: Atmospheric Sciences, Biological Sciences, Energy and Environmental Engineering, Water Resources and Quaternary Sciences. DRI's annual budget now exceeds 16 million and is growing at 15% annually. The Quaternary Sciences Center (formerly the Social Sciences Center) has an annual budget of over a million dollars in grants and contracts and a full-time staff of 21 professionals and technicians. Center research is concentrated on arid and semi-arid lands of the world with particular emphasis on the Intermountain West; opportunities exist for developing additional programs in Quaternary studies. Applications should include a resume and statement of interest. Initial screening of applications will begin by May 1, 1989. Placement is desired by July 1, 1989 although a later date is negotiable. Applications should be addressed to Dr. Peter Wigand, Chairman, Quaternary Sciences Center Executive Director Search Committee, Desert Research Institute, University of Nevada System, P.O. Box 60220, Reno, NV. 89506. For further information call Dr. Peter Wigand at (702) 673-7387. The Desert Research Institute is an affirmative action equal opportunity employer.

University of Michigan Department of Dermatology Training Grants in Cell and Molecular Dermatology

Two National Institutes of Health training grant awards are available in the fields listed below. All positions provide excellent working and living conditions in Ann Arbor and the opportunity to perform research in a progressive, growing, University dermatology department. The positions are available immediately, although we encourage applications now for candidates who wish to start on July 1, 1989. Commitments are generally made for two years for these post-doctoral training grants.

These positions are designed for Ph.D.s or M.D.s who wish to obtain basic laboratory research experience. Applicants who are not United States citizens must have visas that allow receipt of NIH training grant support. All applicants must meet NIH eligibility requirements.

Our areas of interest are:

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MOLECULAR GENETICS AND EPIDERMAL GROWTH CONTROL
REGULATION OF EPIDERMAL FUNCTION
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Address applications specifying fields of interest and including curriculum vitae to:

John J. Voorhees, M.D.
Professor and Chairman
Department of Dermatology
Room 1910 Taubman Center
University of Michigan Medical Center
1500 East Medical Center Drive
Ann Arbor, Michigan 48109-0314

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RESEARCH SCIENTIST PHARMACOLOGIST

Allegheny-Singer Research Institute has an immediate position available for a qualified Scientist to work as a member of a multi-institutional team to develop a new concept in cancer chemotherapy utilizing new analogues of antineoplastic drugs and a catalytic antibody technology. The position requires a Ph.D., post-doctoral experience preferred.

Research experience in pharmacology and pharmacokinetics of the methotrexate or nucleoside antineoplastic analogues is required. Preference will be given to candidates with additional experience in organic chemistry and/or metabolism of research compounds and enzymatic analysis.

Allegheny-Singer Research Institute is affiliated with Allegheny General Hospital, a large tertiary care hospital and a medical school. Excellent benefits and a salary range from \$27,000 depending on relevant experience. Please forward resume in confidence to: Dr. Josef F. Novak, Orthopedic Research Laboratory, ALLEGHENY-SINGER RESEARCH INSTITUTE, 320 E. North Avenue, Pittsburgh, PA 15212. An Equal Opportunity Employer.



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Program in Applied and Computational
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1. Renormalization group methods for fluid dynamics.
2. Spectral element techniques for complex geometries.
3. Lattice-gas methods for fluid dynamics.
4. Currently existing computer programs for transonic and viscous flow calculations.

A Ph.D. is required for all positions. Please send resume with three references to:

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Aerospace Engineering
Code ACM/MEL
P.O. Box CN5263
Princeton University
Princeton, New Jersey 08544-5263

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You will be responsible for establishing the support for an LTB4 antagonistic program in Pharmacology, to include *in vitro* binding and chemotaxis assay processes. You must have a PhD in Biochemistry, Pharmacology or Immunopharmacology, along with several years of relevant postdoctoral experience. **Please respond to Eleanor M. Malone, Department AW.**

ASSISTANT SCIENTISTS

Qualifications for these entry level positions include a BS/MS in Biology or a Biological Science along with the desire to learn new technologies which will launch your career into an exciting and vital industry. In addition, the willingness to handle small laboratory animals is essential. One position will involve conducting and monitoring *in vivo* bronchopulmonary experiments in Drug Development Programs, to include calculating, analyzing, recording and reporting data generated from screening assays. Another position will involve *in vivo* and *in vitro* evaluation of potential IL-1 antagonists, and developing new *in vivo* and *in vitro* models of inflammation and connective tissue destruction. **Please respond to Frances Newman, Department AI.**

If selected, you will be rewarded with an attractive compensation package including salary, bonus and progressive benefits. For consideration, please send your resume **indicating department code**, to the appropriate person, at: Hoffmann-La Roche Inc., Nutley, New Jersey 07110. We are an equal opportunity employer.



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RESEARCH SCIENTIST

The Medical Research Division of American Cyanamid is committed to applying state-of-the-art biotechnology to new drug development. As such, we maintain multidisciplinary research programs in the areas of oncology, CNS, cardiovascular and infectious disease.

We are currently seeking a senior scientist to work in the area of tumor biology. You will be responsible for developing a program to study the regulation of macrophage-tumor interactions in vivo and will work closely with our immunoregulation and molecular biology groups.

The qualified candidate will have a Ph.D. and three to five years of post-doctoral training in the areas of host-tumor interactions and/or macrophage cytokine regulation.

This position, based at Lederle Laboratories just 25 miles north of New York City, offers an excellent salary and benefits package, including a 401K savings plan. If you're ready to make a contribution to a challenging program, send your resume to: Professional Employment Office, Lederle Laboratories, Middletown Road, Pearl River, NY 10965. We are an equal opportunity employer.



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We offer excellent training in microcirculation, an excellent salary and benefits package and beautiful surroundings in La Jolla, California. For consideration, please send your resume to **Dr. Karl-E. Arfors, Director of Explorative Research, Pharmacia Experimental Medicine, 11099 N. Torrey Pines Road, La Jolla, CA 92037.** We are an equal opportunity employer.



Research Scientist in Molecular Genetics

Gene Expression/
Microbial
Physiology



As part of our expanding research activities, we seek an innovative scientist to join our Molecular Genetics Department at the Central Research facility in Groton, Connecticut. This position offers an opportunity to join a group of highly motivated scientists applying biotechnology to the advancement of our drug discovery and medicinal research programs.

We are offering a challenging opportunity for PhD level candidates with training and laboratory experience in microbial physiology. At least two years postdoctoral experience and a documented record of productivity are essential. In addition, you should have experience in developing processes for improving expression of proteins from recombinant microorganisms using microbial physiology and/or molecular biology approaches. Knowledge of heterologous gene expression, host development, mutagenesis/screening, and construction of recombinant genes desirable.

In addition to a stimulating scientific environment, we offer a competitive compensation/benefit package and relocation assistance to an attractive southeastern Connecticut shore community. Qualified applicants should submit their resume and the names of three references, in confidence, to: Jerry K. Larson, PhD, Assistant Director, Employee Resources, Pfizer Central Research, Eastern Point Road, Groton, CT 06340. An equal opportunity employer.

POSITIONS OPEN

SYSTEMS NEUROSCIENTIST

The Department of Anatomy, University of Wisconsin—Madison, invites applications for a 12-month, tenure-track position as assistant professor starting in the summer of 1989. Applicants must have a doctoral degree and postdoctoral training. The department is especially interested in receiving applications from candidates taking structural-functional approaches to understanding cortical mechanism in higher mammals. An attractive feature of the Madison campus is the large group of Visual Neuroscientist. The successful candidate will be expected to participate in the teaching of medical and graduate students. Send curriculum vitae, list of publications, three letters of recommendations, and a summary of research interests to: **Dr. John K. Harting, Chairman, Department of Anatomy, Room 325 SMI, 1300 University Avenue, Madison, WI 53706.** Deadline for applications is 14 April 1989.

The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

ASSISTANTSHIPS

The newly formed Institute for Biotechnology at Texas Tech University announces the creation of **RESEARCH ASSISTANTSHIPS** for graduate study leading to the Ph.D. degree in the areas of biochemistry, cell biology, genetics, microbiology, or molecular biology. In the fall of 1989, a total of five assistantships in the amount of \$12,000 per year are being offered by the Departments of Biological Sciences, Chemistry and Biochemistry, and Agronomy, Horticulture and Entomology. Interested applicants should apply for admission into one of the three departments before 15 April 1989. Support for students for the Summer of 1989 may be possible as well. For more information, contact: **Dr. David B. Knaff, Director, Institute for Biotechnology, P.O. Box 4260, Texas Tech University, Lubbock, TX 79409.**

CONFERENCE

THE FOURTH PRINCETON LIPOSOME CONFERENCE 15–16 May 1989

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The Fourth Princeton Liposome Conference, "From Bench to Bedside," will be a major international gathering of scientists active in the lipid and liposome fields. The conference will serve as a comprehensive forum for discussion of developments in these areas. Contact: **P. Pluta, Conference Coordinator, c/o The Liposome Company, Inc., One Research Way, Princeton, NJ 08540.** Telephone: 609-452-7060.

SYMPOSIUM

INTERNATIONAL SYMPOSIUM

Symposium on the Development of the Vascular System 23–26 April, 1989, The Wisconsin Center, Madison, Wisconsin. Topics include: Embryonic vasculogenesis; Endothelial cell differentiation; Cell-matrix interactions; Vascular addressins; Chemotaxis; Angiogenic factors. Speakers: **Robert Auerbach, Dianna Ausprunk, Eugene Butcher, Edward Clark, Peter Ekblom, Richard Feinberg, Judah Folkman, Lewis Holmes, David Hootnick, Roger Markwald, Drew Noden, David Packard, Thomas Poole, Werner Risau, Hannu Sariola, Glenn Scherer, David Zaleske, Sally Zigmond.** Poster abstracts due 1 April 1989. FAX: 608-262-7319. Registration information: **Center for Developmental Biology, 1117 West Johnson Street, Madison, WI 53706.** Telephone: 608-262-1171.

POSITIONS OPEN

School for Field Studies (SFS) seeks **SENIOR/AND ASSOCIATE FACULTY** for summer programs: Ethnobotany/Ecuador; Landscape Ecology/Colorado; Tropical Ecology/Costa Rica; Acid Rain/Adirondacks; Wildlife Management/Kenya; Cultural Ecology/Himalayas; Bald Eagles/Alaska; Coral Reef Ecology and Marine Parks Management/Virgin Islands; Monk Seals/Greece; Spinner Dolphins/Hawaii; Humpback Whale Ecology/North Atlantic; Bottlenose Dolphins/Alabama; Endangered Primates/Mexico. Ph.D. (M.S. for associate faculty), excellent teaching skills, experience in field research and experiential education. Send detailed letter, curriculum vitae, and references to: **The Dean, SFS, 16 Broadway, Beverly, MA 01915.** Telephone: 508-927-7777.

EXTENDED SEARCH VIROLOGIST

The Department of Biology of The University of Akron has a tenure-track assistant professor position open for September 1989. Applicants must have a Ph.D. with experience in virology and cell culture, and have held a postdoctoral fellowship. Responsibilities include maintaining an active research program, and teaching virology and animal tissue culture. Send curriculum vitae, present and proposed research interests, and three letters of reference to: **Dr. Dale Jackson, Chairman, Department of Biology, The University of Akron, Akron, OH 44325** by 13 March 1989.

FELLOWSHIPS

INTERNATIONAL CANCER RESEARCH FELLOWSHIP

The Hayashibara Mutual Aid Fund, a nonprofit-making organization within the Hayashibara Group, announces a fellowship program. Two awards will be made annually. Fellowship will be taken up at the newly opened Fujisaki Cell Center, which is devoted to basic and applied research related to the problems in human cancer. The fellowship is normally made for 1 year and is renewable for up to 5 years. The fellowship will be expected to commence within 6 months of the announcement of the awards. The awards are for high quality research work in one of the three categories described below.

1. Fundamental Leukemia-Lymphoma Research,
2. Cytokine-Lymphokine Research,
3. Hematopoietic Cell Cultures.

Qualified person, who has a Ph.D., an M.D., or equivalent qualifications, will be awarded on merit to suitably qualified research proposal and experiences. Additional information and application forms will be obtained from: **Jun Minowada, M.D., Director, Fujisaki Cell Center, 675-1, Fujisaki, Okayama 702, Japan.**

POSTDOCTORAL FELLOWSHIP NEUROSCIENCES/ANESTHESIOLOGY. The Harvard Anesthesia Research Center announces a postdoctoral position available immediately for studies on the molecular biology and molecular pharmacology of aspects of spinal nociceptive transmission and analgesia. Background in molecular biology or neurochemistry is highly desirable. Interested applicants should write and send their curriculum vitae to: **Charles Berde, M.D., Ph.D., Department of Anesthesia, Children's Hospital, 300 Longwood Avenue, Boston, MA 02115.** Harvard University is an Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIPS. The Idaho National Engineering Laboratory, Idaho Falls, Idaho, in conjunction with Associated Western Universities, Inc. announces the availability of AWU-DOE Postdoctoral Fellowships for research in the areas of "Microbial/Enzymatic Alteration of Coals" and "Microbial Enhanced Oil Recovery." Applicants must have a doctorate granted within 2 years prior to date of application and a strong background in biochemistry, anaerobic or aerobic microbial metabolism and chemistry. U.S. citizenship or permanent residency is required. Annual stipend is \$27,000 and the length of appointment is 1 year with possible renewal. Other benefits include a relocation allowance and limited travel to professional meetings. For further information and application materials, contact: **Associated Western Universities, Inc., 4190 South Highland Drive, Suite 211, Salt Lake City, UT 84124.** Application deadline is 31 March 1989.

FELLOWSHIPS

POSTDOCTORAL RESEARCH FELLOWSHIP

Postdoctoral research fellowship available to individual interested in cardiac surgery or cardiovascular physiology. NIH-funded research explores the mechanisms associated with the minimization of ischemic injury to the heart and the improvement of postischemic ventricular function. The position is designed to be filled by a M.D. currently in a surgical residency or cardiothoracic fellowship, but candidates with a Ph.D. and surgical experience and/or training in cardiovascular physiology are invited to apply. Available 1 July 1989. Send curriculum vitae and three letters of recommendation to: **David G. L. Van Wylen, Ph.D., Department of Surgery, State University of New York at Buffalo, BB201, Clinical Center, 462 Grider Street, Buffalo, NY 14215.**

COURSES

MARICULTURE: CULTURE OF MARINE INVERTEBRATES FOR RESEARCH PURPOSES. Designed to teach the basics of mariculture to advanced students, this course is scheduled for 21–27 May 1989. Tuition: \$850 (includes room and board). Application deadline is 1 April 1989. For further information, contact: **Admissions Coordinator, Marine Biological Laboratory, Woods Hole, MA 02543.** Telephone: 508-548-3705, extension 216.

MICROINJECTION TECHNIQUES IN CELL BIOLOGY, 21 to 26 May 1989. Director: **Robert Silver, Cornell University.** In this 5-day course students will learn to microinject single cells and use many of the latest methods of light microscopy. Application deadline is 1 April 1989. Tuition: \$1550 (includes materials, room/board). For further information contact: **Admissions Coordinator, Marine Biological Laboratory, Woods Hole, MA 02543.** Telephone: 508-548-3705, extension 216.

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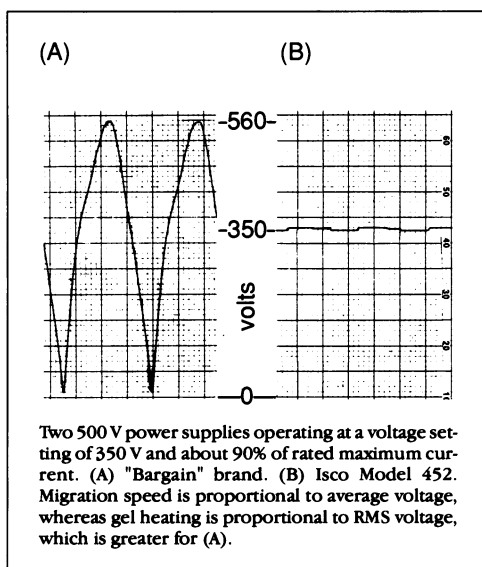


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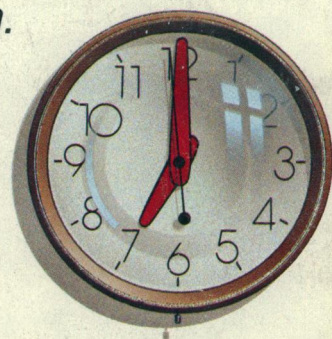
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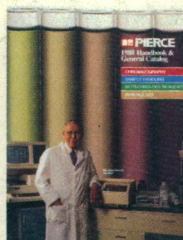
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