



"View along strike of the Sierra Placeres melange showing block of massive serpentinitized harzburgite enveloped in a steeply dipping foliated serpentine matrix." Such blocks are thought to be tectonic fragments from the adjacent Vizcaino Norte and Vizcaino Sur terranes. [From the paper by T. E. Moore in *Tectonostratigraphic Terranes of the Circum-Pacific Region*]

The papers make it clear that the gist of terrane analysis is the tabulation of cross-cutting structural relations, isotopic and paleontologic ages, and physical conditions during metamorphism, as well as of data from provenance studies of sedimentary rocks, paleomagnetic analyses, and basic field geology and routine laboratory analysis. The primary objective of this work is to identify differences between juxtaposed terranes. The next problem, of course, is whether the differences in sediment composition, metamorphic history, or magnitude of penetrative deformation result from differing processes in the same tectonic setting with less than a few tens of kilometers of relative motion or in geologic settings once widely separated.

Interpretative diagrams ("Dewey-grams") based on plate tectonics help conceptualize the nature of many of the stratigraphic, structural, and metamorphic differences that can develop between terranes that formed and evolved at a convergent, divergent, or conservative plate margin (the last, as discussed in the paper by Crowell, being a tectonic setting where shuffling of highly disparate terranes along faults with only modest offsets is likely to become extensive). Admittedly, such diagrams are simplistic and have many shortcomings resulting from our lack of understanding of the factors and processes that control the tectonostratigraphic evolution of a plate margin. But their scarcity in the papers greatly hinders a reader's recognition of the geologic and geophysical relationships that can be explained without appealing to long-distance movement, as well as impeding the direct compar-

ison of the papers with those written by other workers on the same region.

In sum, the book does not make clear to this reviewer why "terrane analysis" is endorsed by some workers as heralding a breakthrough in our understanding of the continents. The idea that terranes (for example, seamounts or oceanic island arcs) can move long distances before accretion to a continent is not new. How does the thinking of a terrane enthusiast in the 1980s really differ from that found in the publications of Hamilton, Ernst, Dickinson, Page, Yeats, Dewey and Bird, and numerous others during the late 1960s and early 1970s? The contributors to this volume have simply put the regional geology of continental margins into a highly mobilistic plate tectonics context. Perhaps (as Kerr suggested in his report on the meeting) the hubbub about geologic terranes mostly has to do with terminology.

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Books Received

Archaeopteryx, the Primordial Bird. A Case of Fossil Forgery. Fred Hoyle and Chandra Wickramasinghe. Davies, Swansea, U.K., 1986. 135 pp., illus. + plates. £10.95.

Arctic Dreams. Imagination and Desire in a Northern Landscape. Barry Lopez. Bantam, New York, 1987. xxviii, 417 pp., illus. Paper, \$4.95. Reprint, 1986 edition.

Astrochemistry. M. S. Vardya and S. P. Tarafdar, Eds. Reidel, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). xxvi, 613 pp., illus. \$106. International Astronomical Union symposium no. 120 (Goa, India, Dec. 1985).

Astrocytes. Sergey Fedoroff and Antonia Vernadakis, Eds. Vol. 1, Development, Morphology, and Regional Specialization of Astrocytes. xii, 382 pp., illus. \$75. Vol. 2, Biochemistry, Physiology, and Pharmacology of Astrocytes. xii, 421 pp., illus. \$80. Vol. 3, Cell Biology and Pathology of Astrocytes. xiv, 472 pp., illus. \$90. Academic Press, Orlando, FL, 1987. Series in Cellular Neurobiology.

Cosmic Understanding. Philosophy and Science of the Universe. Milton K. Munitz. Princeton University Press, Princeton, NJ, 1987. x, 287 pp. \$25.

Crustacean Biogeography. Robert H. Gore and Kenneth L. Heck, Eds. Balkema, Accord, MA, 1986. xii, 292 pp., illus. \$49.50. Crustacean Issues, 4. Based on a symposium.

Crystalline Semiconducting Materials and Devices. Paul N. Butcher, Norman H. March, and Mario P. Tosi, Eds. Plenum, New York, 1986. xviii, 645 pp., illus. \$89.50. Physics of Solids and Liquids. Based on a college, Trieste, spring 1984.

Electron Microscopy in Forensic, Occupational, and Environmental Health Sciences. Samarendra Basu and James R. Millette, Eds. Plenum, New York, 1986. xii, 285 pp., illus. \$55. From a symposium, Louisville, KY, Aug. 1985.

The Elements of Artificial Intelligence. An Introduction Using LISP. Steven L. Tanimoto. Computer Science Press, Rockville, MD, 1987. xiii, 530 pp., illus. \$35.95. Principles of Computer Science Series.

Empirical Model-Building and Response Surfaces. George E. P. Box and Norman R. Draper. Wiley, New York, 1987. xvi, 669 pp., illus. \$45. Wiley Series in Probability and Mathematical Statistics.

Functions of the Proteoglycans. Wiley-Interscience, New York, 1986. x, 299 pp., illus. \$47.50. Ciba Foundation Symposium 124 (London, Jan. 1986).

The Galaxy and the Solar System. Roman Smoluchowski, John N. Bahcall, and Mildred S. Matthews, Eds. University of Arizona Press, Tucson, 1986. xii, 483 pp., illus. \$29.95. Space Science Series. Based on a conference, Tucson, AZ, Jan. 1985.

The Geology of North America. Vol. M, The Western North Atlantic Region. Peter R. Vogt and Brian E. Tucholke, Eds. Geological Society of America, Boulder, CO, 1986. xiv, 696 pp., illus. + boxed plates. \$47.50. Decade of North American Geology Project series.

Interaction of Cells with Natural and Foreign Surfaces. N. Crawford and D. E. M. Taylor, Eds. Plenum, New York, 1986. xiv, 330 pp., illus. \$59.50. From a symposium, London, Nov. 1984.

Interferons as Cell Growth Inhibitors and Antitumor Factors. Robert M. Friedman, Thomas Merigan, and T. Sreevalsan, Eds. Liss, New York, 1986. xxxviii, 541 pp., illus. \$88. UCLA Symposia on Molecular and Cellular Biology, New Series, vol. 50. From a symposium, Steamboat Springs, CO, April 1986.

An Introduction to Carbonate Sediments and Rocks. Terence P. Scoffin. Blackie, Glasgow, and Chapman and Hall, New York, 1987. x, 274 pp., illus. Paper, \$17.95.

Mass Spectrometry in the Analysis of Large Molecules. C. J. McNeal, Ed. Wiley, New York, 1986. x, 221 pp., illus. \$44.95.

Mathematical Problems of Statistical Mechanics and Dynamics. A Collection of Surveys. R. L. Dobrushin, Ed. Reidel, Dordrecht, 1986 (U.S. distributor, Kluwer, Norwell, MA). xiv, 261 pp. \$89. Mathematics and Its Applications (Soviet Series).

The Mathematical Structure of the Human Sleep-Wake Cycle. Steven H. Strogatz. Springer-Verlag, New York, 1986. viii, 239 pp., illus. Paper, \$22.80. Lecture Notes in Biomathematics, vol. 69.

Mathematics of Random Phenomena. Random Vibrations of Mechanical Structures. Paul Krée and Christian Soize. 2nd ed. Reidel, Dordrecht, 1986 (U.S. distributor, Kluwer, Norwell, MA). xvi, 438 pp., illus. \$98. Mathematics and Its Applications. Translated from the French edition (1983) by Andrei Jacob.

Nutrition and the Quality of Life. G. H. Bourne, Ed. Karger, Basel, 1987. x, 215 pp., illus. \$108. World Review of Nutrition and Dietetics, vol. 49.

Nutritional Diseases. Research Directions in Comparative Pathobiology. Dante G. Scarpelli and George Migaki, Eds. Liss, New York, 1986. xiv, 568 pp., illus. Current Topics in Nutrition and Disease, vol. 15. From a symposium, Bethesda, MD, Nov. 1985.

Odd Perceptions. Richard L. Gregory. Methuen, New York, 1986. x, 230 pp., illus. \$19.95.

The Peptides. Analysis, Synthesis, Biology. Sidney Udenfriend and Johannes Meienhofer, Eds. Vol. 8, Chemistry, Biology, and Medicine of Neurohypophyseal Hormones and Their Analogs. Clark W. Smith, Ed. Academic Press, Orlando, FL, 1987. xii, 370 pp., illus. \$75.

Personal Computers for Scientists. A Byte at a Time. Glenn I. Ouchi. American Chemical Society, Washington, DC, 1987. x, 276 pp., illus. \$34.95; paper, \$22.95.

Prospective Studies on Children With Sex Chromosome Aneuploidy. Shirley G. Ratcliffe and Natalie Paul, Eds. Liss, New York, 1986. xvi, 328 pp., illus. \$89. March of Dimes Birth Defects Foundation, Birth Defects, Original Article Series, vol. 22, no. 3. Based on a workshop, Edinburgh, June 1984.

Psychobiology of Reproductive Behavior. An Evolutionary Perspective. David Crews, Ed. Prentice-Hall (Simon and Schuster), Englewood Cliffs, NJ, 1987. xiv, 350 pp., illus. Paper, \$20.

Rationality, Relativism and the Human Sciences. J. Margolis, M. Krausz, and R. M. Burian, Eds. Nijhoff, Dordrecht, 1986 (U.S. distributor, Kluwer, Norwell, MA). viii, 243 pp. \$58.90. Studies of the Greater Philadelphia Philosophy Consortium.

Reactor Physics for Developing Countries and Nuclear Spectroscopy Research. G. Medrano and K. P. Lieb, Eds. World Scientific, Singapore, 1986 (U.S. distributor, Taylor and Francis, Philadelphia). xviii, 757 pp., illus. \$79. From a course, Bogota, Colombia, Sept. 1983.

Readings in the Philosophical Problems of Parapsychology. Antony Flew, Ed. Prometheus, Buffalo, NY, 1987. 376 pp. \$24.95; paper, \$16.95.

Real-Variable Methods in Harmonic Analysis. Alberto Torchinsky. Academic Press, Orlando, FL, 1986. xii, 462 pp. \$89; paper, \$45. Pure and Applied Mathematics 123.

Products & Materials

Nonlinear Curve-Fitting Software

ENZFITTER is a menu-driven software package that fits two sets of experimental data by nonlinear regression to an equation. The equations that can be fitted include linear regression, pK_a determination, Michaelis-Menten kinetics, binding equations, single-exponential, double-exponential, first-order rate equations, or an equation entered by the user. Results are presented in both tabular and graphic form; displays on the screen may be printed as well. ENZFITTER reads LOTUS 1-2-3 PRN files. ENZFITTER operates on IBM PCs with 384 kilobytes of random-access memory, DOS 2.0 or later, and an IBM Color Graphics Adapter or an Enhanced Graphics Adapter—Hercules Graphics Adapter. Elsevier-BIOSOFT. Circle 536.

Immunological Reagents Against Rodents, Rabbits

Immunoglobulin G (IgG) against mice and rabbits is available in unconjugated, fluorescein-conjugated, horseradish peroxidase-conjugated, and biotinylated forms. The reagents against mice are made in horses; against rabbits, in goats. Most of these reagents have little or no cross-reactivity. The biotinylated IgG binds gamma chains, whereas the other reagents bind both heavy and light chains. Vector Laboratories. Circle 534.

Amino Acid Analyzer

The HP AminoQuant automatically analyzes 17 primary and secondary amino acids from the hydrolysates of proteins and peptides. Detection is in the low picomole range. The HP AminoQuant delivers typical relative-standard deviations of better than 2% for measurements on 10 pmol of all specified amino acids. Calculations performed automatically include the amount of amino acid, residues per mole, expected molecular weight:calculated molecular weight, and the percentage of amino acids in sample. Hewlett-Packard. Circle 603.

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.

Refrigerated, High-Speed Microcentrifuge

Model MR1411 is a refrigerated, high-speed microcentrifuge that accommodates tubes ranging from 0.5 to 10 ml. Its top speed is 12,000 rev/min, generating centrifugal forces as high as 13,690*g*. Rotor-chamber temperature may be held below ambi-



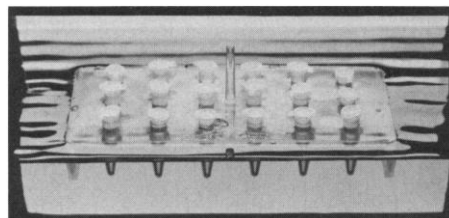
ent, so that samples need not be centrifuged in a cold room. Other features include closed-loop speed control, digital speed display, and automatic dynamic electronic braking. Jouan. Circle 539.

EM Specimens from Fresh Tissue

The Micro-Cut H1200 Microtome sections fresh or fixed tissue in thicknesses of 10 to 1000 μm without prior embedding or freezing. The vibrating blade causes minimal structural damage. Section thickness, cutting frequency, and forward speed are controlled by the user. The specimen may have a diameter as large as 40 mm. A high-power motor riding on crossed-roller linear bearings prevents vertical blade movement. Bio-Rad, Polaron Instruments Division. Circle 540.

Floating Tube Rack

The Bubble Rack is a molded, one-piece tube rack that floats. Tubes are held firmly in place, which prevents them from floating away and ensures uniform incubation, yet



they may be released with light pressure on the side support. The Bubble Rack is fully autoclavable and is available in several sizes to hold tubes of capacities of 1.5 to 50 ml. Bel-Art Products. Circle 532.

X-ray Fluorescence Spectrometer

The SRS 303 is a compact, sequential, computer-controlled x-ray spectrometer with the window tube for sample excitation located at the end. An internal ten-position sample changer brings each sample in turn to a defined measuring position under vacuum. The window measures 19.5 mm by 125 μm . The reduced distance between the anode and the sample results in an intensity gain of as much as 40%. The software includes programs for both qualitative and quantitative analyses. Siemens Energy & Automation. Circle 537.

Literature

Synthetic, Rationally Designed C-Kinase Activators describes two products for studying protein kinase C. LC Services. Circle 542.

Radionuclides is a wall chart featuring the 16 most commonly used radionuclides and their characteristics. Packard Instrument. Circle 543.

Electrophoresis Products is a brochure describing equipment, supplies, and precast gels for isoelectric-focusing and polyacrylamide-gradient electrophoresis. Isolab. Circle 544.

SB-CC is a catalog listing gas chromatographs, liquid chromatographs, leak detectors, gas analyzers, and related products. GOW-MAC Instrument. Circle 545.

The Retention Times newsletter features articles about high-performance liquid chromatography. Rainin Instrument. Circle 546.

Biologics is a newsletter that reports on research techniques in which CALBIO-CHEM biochemicals are used. Behring Diagnostics. Circle 547.

Surface Heating for Research and Industry is a 16-page brochure describing special-application surface heaters, with emphasis on high-temperature applications of heating tapes and custom-designed blankets and jackets. BriskHeat. Circle 548.

Specialty Gases and Special Gases Equipment is a two-volume catalog set with specifications, properties, applications, and safety information for gases and gas mixtures in the first volume and technical specifications, functional schematics, and flow diagrams for gas-handling, gas-regulating, and gas-blending equipment in the second. Air Products and Chemicals. Circle 549.

Transfer and Immobilization of Nucleic Acid to Solid Supports is a chart describing techniques for Southern and Northern transfers, dot blots, slot blots, and colony and plaque lifts. Schleicher & Schuell. Circle 550.

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.

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Thursday, 10 a.m., 2 weeks prior to issue date (mailed on issue date).

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

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To ESTIMATE ad cost:

Structure ad copy on a separate page, on lines of 52 characters and spaces. Include any desired heading. Each line of heading, and/or extra line spaces, and all partial lines (including centered reply information) are counted as full lines. Ad titles located within the text are printed in boldface caps and are only 42 characters per line. In ESTIMATING the cost, multiply total lines \times \$35.00 = 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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Send copy for all **Positions Wanted** ads and **Line Classified** ads less than 1/6 page in size (39 lines) to:

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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

Anatomist, Ph.D. 1984. Publications in neuromuscular physiology and histochemical, electromyographic, and morphometric aspects of feeding and locomotion; NIH postdoctoral fellow; teaching experience in gross anatomy, histology, embryology, and anthropology; seeks tenure-track academic position. Box 91, SCIENCE. X

Biochemist/Cell Biologist, Ph.D. Research expertise in protein purification and characterization, enzymology, lipid biosynthesis, zinc nutrition. Publications, extensive university teaching and administration experience. Seeks academic/industrial/research position in California. Box 95, SCIENCE. X

Biochemist, Ph.D. (1979). Medicinal chemistry, M.Sc. International teaching with research experience in enzyme purification and characterization. Seeks any suitable position. Languages—English, French, and Arabic. Box 87, SCIENCE. X

POSITIONS WANTED

Broad-Based Biologist, excellent teacher, seeks teaching/undergrad research position in college/smaller university to teach cell, genetics, microbiology, development, histology, microtechniques, invertebrate, entomology. Ph.D. entomology, 1985, 12 years of research experience genetics, development. Excellent references. Box 98, SCIENCE. X

Microbiologist, B.A. 1981. Seven years of research experience in bioactive natural product isolation (TLC, LC, HPLC, DCCC, chromatotron) and bioassay (MIC, bioautography, Ames) seeks industrial position. Box 94, SCIENCE. X

POSITIONS OPEN

ASSISTANT CHEMIST—Ph.D. in theoretical chemistry or theoretical physics. Three years of experience as a researcher in theoretical chemistry and theoretical physics. Research experience should include: a) theories of gas-phase reactive dynamics and b) structure and dynamics of small isolated atomic clusters, including both analytical and computer simulation studies. The above evidenced by publications in refereed journals. Will initiate and develop a theoretical program in the field of cluster reactions in general and those of transition metal clusters in particular. Carry out dynamical studies (analytical modeling and numerical simulations) of cluster properties aimed at the conceptual understanding and interpretation of experimental data. As a further step, develop theories with predictive capability that can guide future experiments and build a theoretical framework for the deeper (microscopic) understanding of the kinetic, catalytic, thermodynamic and structural properties of small metal clusters. Salary: \$3,675 per month; 40 hours per week; 8:30 a.m. to 5:00 p.m. Send résumé to: **Illinois Department of Employment Security, 401 South State Street—3 South, Chicago, IL 60605, Attn: Robert S. Felton, Reference #V-IL 7169-F.** An employer paid ad.

The Department of Animal and Veterinary Sciences, University of Maine, Orono, seeks applicants for an **ASSISTANT PROFESSOR** position in the area of animal physiology. This is a full-time 9-month appointment—60% research/40% teaching. Applicant should have a Ph.D. in dairy/animal science or closely related field.

Postdoctorate experience and previous demonstrated success in research and teaching preferred. Candidate will be expected to develop a research program in the area of growth regulation, lactation physiology, or disease resistance. Research will need to complement ongoing departmental research in nutrition or reproductive physiology, stress/disease. Willingness to participate in interdepartmental research is essential. A strong research program will require competition for outside funding. Teaching responsibilities include both technical and undergraduate courses in general and reproductive physiology, and livestock production.

Send a complete résumé, transcripts, and three letters of reference to: **Dr. D. D. Stimpson, Chairman, Department of Animal and Veterinary Sciences, University of Maine, 128 Hitchner Hall, Orono, ME 04469.** Review of applications will begin 15 July 1987.

UNIVERSITY OF FLORIDA

ASSISTANT PROFESSOR, MOLECULAR PATHOGENESIS. The Department of Immunology and Medical Microbiology at the University of Florida College of Medicine invites applications for tenure-track appointments from individuals using modern molecular technology to address questions related to the pathogenesis of infectious agents. Applicants should hold the Ph.D., M.D., or equivalent degree and have postdoctoral training. Tentative starting date, 1 January 1988, or thereafter. The Department of Immunology and Medical Microbiology has begun a second phase of expansion which will reach maturity when new research facilities under construction become available in the near future. Applicants should submit curriculum vitae, present and future research plans, and the names of three references to: **Dr. William W. Hauswirth, Chairman, Search Committee, Department of Immunology and Medical Microbiology, Box J-266, JHMH, College of Medicine, University of Florida, Gainesville, FL 32610.** The recruiting deadline is 1 September 1987. *Equal Employment Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ANTICANCER/ANTIVIRAL SCIENTIST

Associate researcher to work on anticancer/anti-HSV/anti-HIV agents, must have a doctoral degree or equivalent with 3 years of experience in tissue culture, enzyme kinetics, drug metabolism, HPLC, molecular biology techniques, and animal toxicology for IND applications. Salary will be \$23,000 per year. Send résumé to: **Dr. Ting-Chao Chou, Laboratory of Pharmacology, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.**

ASSISTANT PROFESSOR OF LOW TEMPERATURE BIOLOGY OF CROP PLANTS/MEMBRANE BIOCHEMISTRY

Applications are solicited for a tenure-track position in the area of low-temperature biology of crop plants with emphasis in the area of plant membrane biochemistry with an 80% research and 20% teaching effort distribution. The appointee will be expected to establish a fundamental and independent research program that will form an integral part of an interdisciplinary program in low temperature biology. Pertinent areas include membrane lipid metabolism during acclimation to low temperatures and mechanisms of low temperature-induced membrane perturbations that relate to chilling and freezing injury. Preference will be given to individuals with postdoctoral experience in a relevant area. Qualified applicants should submit a letter of application, résumé, academic transcripts and the names and addresses of three references to: **Dr. R. J. Wagenet, Chairman, Department of Agronomy, 236 Emerson Hall, Cornell University, Ithaca, NY 14853-0144.** Closing date for receipt of application is 31 July 1987.

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ASSISTANT/ASSOCIATE PROFESSOR OF BIOCHEMISTRY. An additional tenure-track faculty position is available in 1987 to 1988 for an individual with at least 3 years of postdoctoral experience. Candidates with research interests in cellular biochemistry and metabolism, receptor structure and function, hormone action and transmembrane signaling, molecular biology, and neurochemistry are particularly encouraged to apply. Applicants will be expected to perform independent research, obtain extramural funding, and participate in the teaching of biochemistry to graduate and professional students. Modern laboratory space, core equipment, and competitive salary will be provided to the successful candidate. Applicants should send curriculum vitae, outline of research plans, three letters of reference, and most significant reprints to:

John N. Fain, Ph.D.
Van Vleet Professor and Chairman
Department of Biochemistry, College of Medicine
University of Tennessee, Memphis
800 Madison Avenue, Memphis, TN 38163
Attention: Cheryl M. Colson

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

ASSISTANT/ASSOCIATE PROFESSOR OF PHARMACOLOGY

The expanding Department of Pharmacology at Northeastern Ohio Universities College of Medicine invites applications from individuals with strong research credentials in CNS Pharmacology for a tenure-track position, available immediately, at the level of assistant or associate professor. Applicants must have a Ph.D. degree, have completed not less than 2 years of postdoctoral training and have demonstrated ability to conduct independent research. Some teaching experience is desirable since the position requires participation in teaching of medical and graduate students. The medical school is housed in a modern facility on 55 acres and is in close proximity to a wide variety of living styles. Many opportunities are available in the geographic area for academic and scientific interactions. Send curriculum vitae including the names of three references by 1 September 1987 to: **Dr. Martin D. Schechter, c/o the Office of Human Resources, Northeastern Ohio Universities College of Medicine, P.O. Box 95, Rootstown, OH 44272.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

UNIVERSITY OF FLORIDA

ASSISTANT PROFESSOR, MOLECULAR IMMUNOLOGY. The Department of Immunology and Medical Microbiology at the University of Florida College of Medicine invites applications for tenure-track appointments from individuals using molecular technology to address questions related to molecular aspects of the immune system. Applicants should hold the Ph.D., M.D., or equivalent degree and have postdoctoral training. Tentative starting date, 1 January 1988, or thereafter. The Department of Immunology and Medical Microbiology has begun a second phase of expansion which will reach maturity when new research facilities under construction become available in the near future. Applicants should submit curriculum vitae, present and future research plans, and the names of three references to: **Dr. William W. Hauswirth, Chairman, Search Committee, Department of Immunology and Medical Microbiology, Box J-266, JHMHC, College of Medicine, University of Florida, Gainesville, FL 32610.** The recruiting deadline is 1 September 1987. *Equal Opportunity/Affirmative Action Employer.*

The Department of Pathology, Medical College of Georgia, Augusta, Georgia, invites applications for the position of **ASSISTANT/ASSOCIATE PROFESSOR OF PATHOLOGY** in the section of anatomic pathology. Applicants should have a Ph.D. degree, with interest and experience in basic immunological techniques, in situ hybridization methodology, oncogenes, and tissue culture. Responsibilities will include providing direction to an immunopathology service laboratory, teaching material and graduate students and independent research with extramural funding. The position will be open on 1 July 1987. Send curriculum vitae and references to: **R. N. Rao, M.D., Department of Pathology, Medical College of Georgia, Augusta, GA 30912.** *Equal Opportunity/Affirmative Action Program.*

UNIVERSITY OF MARYLAND COLLEGE PARK LIBRARIES BIBLIOGRAPHER FOR LIFE SCIENCES AS-4840

The University of Maryland College Park Libraries invites nominations and applications for a newly developed bibliographer position. The position will be responsible for developing library collections to support campus curricula, teaching, and research in: animal sciences, botany, zoology, biology, and agricultural sciences. Nature of collection development includes: analysis of collections for strengths and weaknesses, formulation and application of collecting policies, monitoring of expenditures, developing and maintaining close working relationships with faculty and other users, with the book trade world, and with other Library employees. **QUALIFICATIONS:** Required: M.L.S. from ALA-accredited program. Working knowledge of one of the following languages: French, German, Italian, Russian, or Spanish. Minimum 1 year of experience in collection development. Preferred: Graduate degree in one of the subject areas listed above. Collection development experience in ARL library including collection analysis, collection development policy formulation and application; work experience in dealing with the book trade world; demonstrated ability to interact effectively with library staff and diverse clientele, and ability to communicate effectively in oral and written form. **SALARY:** \$21,428 minimum. Salary commensurate with experience. Excellent benefits. For full consideration, submit résumé and names/addresses of three references by 31 July 1987 to: **Virginia Sojchei, Personnel Librarian, McKeldin Library, University of Maryland, College Park, MD 20742.** *Affirmative Action/Equal Opportunity Employer.*

BOTANIST—One-year assistant professor position with teaching responsibilities including general botany, an upper level course in plant biology, and a third course to be negotiated. Position begins 15 August 1987. Research opportunities include modern lab, herbarium, and 1000-acre campus nature preserve. Send letter of interest, curriculum vitae, and names and addresses of three references by 24 July 1987 to: **Dr. Paul Hamilton, Chairman, Department of Biology, University of West Florida, Pensacola, FL 32514.** *Equal Opportunity/Affirmative Action Institution.*

POSITIONS OPEN

BIOLOGY LABORATORY COORDINATOR

Applications are invited for a position of Laboratory Coordinator in the Biology Department of Rice University for the 1987 to 1988 academic year. This is a university staff appointment. We are seeking an individual to assume responsibility for the operation of the undergraduate introductory and advanced experimental laboratory courses. The salary is competitive and depends upon qualifications. An advanced degree in biological science and/or suitable experience in a university laboratory is required. For consideration, send résumé and letters of recommendation to:

**Dr. R. M. Glantz
Department of Biology
Rice University
P.O. Box 1892
Houston, TX 77251**

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BIOPHYSICIST

The Department of BioStructure and Function of the University of Connecticut Health Center is seeking a biophysicist for a non-tenured appointment as an assistant professor.

The successful candidate will be a full-time researcher in a 5-year funded grant to investigate the biomechanics of connective tissues, at the molecular level, utilizing physical and computational approaches and methods. Fiber x-ray diffraction experience is desirable, but not essential.

The program is part of the Biomolecular Structure Analysis Center, a facility dedicated to the structure and function of biomolecules. The Center houses offices, wet laboratories, a dedicated VAX computer network with molecular modeling terminals, and an x-ray laboratory, with state-of-the-art crystallographic and small-angle diffraction equipment.

Please send résumé and names of three references to:

**Professor Elton P. Katz
Department of BioStructure and Function
University of Connecticut Health Center
Farmington, CT 06032**

An Affirmative Action/Equal Opportunity Employer M/W/H.

CARDIOVASCULAR PHYSIOLOGIST interested in basic science with clinical orientation needed for a modern surgical cardiovascular research lab located in a large metropolitan hospital in Atlantic coastal state region. Ph.D./M.D. level only. Hospital has medical school affiliation. Send curriculum vitae to: **Box 99, SCIENCE.**

CELL BIOLOGIST—Establish basic research laboratory studying anterior segment of the eye. Joint appointment with the Neurological Sciences Institute and Department of Ophthalmology of Good Samaritan Hospital and Medical Center available for a scientist with research interests in one or more of the following areas: cell biology of the cornea (epithelium, endothelium, or stroma), regulation of cell growth and wound healing, ciliary body, trabecular meshwork, biochemistry of the aqueous humor. Candidates familiar with methods of tissue culture, protein biochemistry, molecular biology or related areas preferred. Position will complement current departmental clinical research programs in cornea and glaucoma. Postdoctoral research experience required. Level of appointment will depend upon research accomplishments. Please send inquiries and résumé (including the names of three references) by 1 November 1987 to: **Michael W. Kaplan, Ph.D., Chairman, Anterior Segment Search Committee, Neurological Sciences Institute, Good Samaritan Hospital and Medical Center, 1120 NW 20th Avenue, Portland, OR 97209-1595.** *An Equal Opportunity Employer.*

CLINICAL RESEARCH ASSOCIATE. St. Luke's Hospital, Milwaukee, Wisconsin. Full-time position available September 1987. Excellent opportunity available to join our oncological clinical research project. Candidates must have 3 to 5 years of research experience including research in mammalian tissue culture, blood banking and aseptic techniques. Candidates should send curriculum vitae immediately and call collect to discuss your qualifications: **D. Brutus, Employment Department, St. Luke's Hospital, 2900 West Oklahoma Avenue, Milwaukee, WI 53215.** Telephone: 414-649-6378. *An Equal Opportunity Employer M/F/H/V.*

POSITIONS OPEN

The University of Texas Medical School at Houston is committed to establishing a new Department of Microbiology with a focus on molecular biology and is seeking a **CHAIRPERSON** to direct this undertaking. Resources will be available for the initial recruitment of 8 to 10 full-time faculty members and further expansion is anticipated. Candidates for this position should have an established record of recognized scientific accomplishments, a clear interest in fostering and developing educational programs at the medical and graduate school levels, and administrative and leadership abilities. Interested parties should forward their curriculum vitae, bibliography and the names of three references to: **Dr. Stanley G. Schultz, Professor and Chairman, Department of Physiology and Cell Biology, University of Texas Medical School, P.O. Box 20708, Houston, TX 77225.** Deadline for applications is 1 October 1987. *An Equal Opportunity Employer. Women and minorities are encouraged to apply.*

CHAIRPERSON, DEPARTMENT OF NEURO-ONCOLOGY—The University of Texas System Cancer Center, M. D. Anderson Hospital and Tumor Institute is recruiting a Chairperson for its Department of Neuro-Oncology. This is a prestigious position with 12 faculty positions and supporting clinical and laboratory programs. Candidate must have an established reputation as a clinician and investigator with interests in research related to brain tumors. Clinical expertise and administrative experience in academic setting essential. Send curriculum vitae to: **Gerald P. Bodey, M.D., Chairman, Neuro-Oncology Search Committee, Division of Medicine, Box 47, Houston, TX 77030.** *An Affirmative Action/Equal Opportunity Employer.*

COASTAL OCEANOGRAPHER, physical, geological, engineering background. Tenure-track, assistant professor, Oceanography Department, U.S. Naval Academy. Available about 31 December 1987. Earned Ph.D., field research and teaching experience required. Send résumé with names of three references to: **Dr. John W. Foerster, Chairman Faculty Search Committee, Oceanography Department, U.S. Naval Academy, Annapolis, MD 21402-5026.** Telephone: 301-267-3561. Closing date 15 October 1987. *Equal Opportunity Employer.*

CYTOGENETICIST

Board-certified/Board-eligible Ph.D. cytogeneticist to join expanding laboratory. Interest/experience in gene probe diagnosis and related technologies. Competitive salary and fringe benefit package. Send curriculum vitae to:

**Dr. Charles Garrison
Genetics & Laboratory Medicine, Inc.
3300 Buckeye Road, Suite 178
Atlanta, GA 30341**

DIRECTOR DEVELOPMENTAL NEUROBIOLOGY

The Eunice Kennedy Shriver Center for Mental Retardation in Waltham, Massachusetts, a suburb of Boston, seeks a Director of Developmental Neurobiology. Candidates should hold a Ph.D. and/or M.D. degree. Five or more years of experience as an independent investigator in neurobiology, and a history of successful grant achievement are essential. Experience in one or more of the following is preferred: cell surface antigen expression in the developing nervous system, cell-cell interactions, regulation of neuronal growth and differentiation, functional systems organization, modern morphological techniques. The Director will be expected to lead a team of developmental neurobiologists and collaborate with colleagues in the Center's other research departments, which include behavioral neurology, biochemistry, and molecular neurogenetics.

The Shriver Center is a non-profit, multidisciplinary research organization. It is a regional Mental Retardation Research Center, which is supported in part by the National Institutes of Health and Commonwealth of Massachusetts. The Center is affiliated with the Massachusetts General Hospital. The Director will be recommended for academic appointment at Harvard Medical School, at a level commensurate with prior experience and achievement.

Inquiries and curriculum vitae should be sent to: **Thomas O. Fox, Ph.D., Chairman Search Committee, Shriver Center, 200 Trapelo Road, Waltham, MA 02254.**

POSITIONS OPEN

DEPUTY DIRECTOR OFFICE OF HEALTH AND ENVIRONMENTAL ASSESSMENT WASHINGTON, D.C. \$64,700 to \$73,400

U.S. Environmental Protection Agency is seeking highly qualified candidates for the position of Deputy Director, Office of Health and Environmental Assessment. The Director and Deputy are responsible for the management of a program for assessing the effects of environmental pollutants on human health and ecological systems. This includes performing risk assessments and developing risk assessment methods and guidelines for all Agency program offices, and research aimed at reducing uncertainty in risk assessment.

To meet the requirements of the position, applicants must have a degree (doctorate preferable) in life or health sciences, or a related field, and substantial experience in human health risk assessment, and must meet the technical and executive qualifications described in the Vacancy Announcement. Call or write for a copy of the Vacancy Announcement to: Edna Morse, Environmental Protection Agency, SES and Executive Resources Unit, PM-224, 401 M Street, S.W., Washington, DC 20460. The telephone number is: 202-382-3328. Applications must be postmarked by 31 July 1987.

EPA is an Equal Opportunity Employer.

DIRECTOR: COMPUTER CORE/IMAGE ANALYSIS FACILITY

Internationally recognized brain research laboratory at a major medical center seeks a scientist with a background in quantitative image analysis and interactive computer graphics. This individual should have experience with UNIX systems and a desire to work in a research environment. While an advanced degree (M.S. or Ph.D.) in computer science is desirable, a suitable candidate might otherwise be a neuroscientist whose interest has shifted to computer science. Interpersonal and management skills are required as this individual will help coordinate and plan the future direction of the research activities of the facility, select system hardware for purchase, supervise (and hire) technical staff and interact with other scientists.

This is an academic position at the assistant professor or associate research professor level.

Send résumé to: D. J. Reis, Laboratory of Neurobiology, Cornell University Medical College, 411 East 69th Street-KB410, New York, NY 10021. *Equal Opportunity Employer/Affirmative Action/M/F/H/V.*

Southern Illinois University at Carbondale invites applications for the position of **DIRECTOR OF THE OFFICE OF RESEARCH DEVELOPMENT AND ADMINISTRATION AND ASSOCIATE DEAN OF THE GRADUATE SCHOOL**. The Director participates in the development, administration and support of research and other sponsored programs on a university-wide basis. Specific responsibilities include the planning, staffing, budgeting and management of pre- and post-award sponsored project activities, the internal research program, two major research laboratories, and eight research support units. Strong preference will be given to a person with university-wide research administration experience and with proven capabilities as a research scholar. Faculty rank and appointment as Associate Dean are dependent upon qualifications. Applications, along with three references, should be received by 15 September 1987, although applications will be accepted until position is filled. Send to: Chair, Search Committee for Director, ORDA, Office of the Dean of the Graduate School, Southern Illinois University at Carbondale, Carbondale, IL 62901. *Southern Illinois University at Carbondale is an Equal Opportunity/Affirmative Action Employer.*

ELECTRON MICROSCOPIST YALE UNIVERSITY

Ideally with experience in routine EM, pre- and post-embedding immunocytochemistry, ultracyromicrotomy; will work in neurobiology research laboratory with histological sections of neuronal tissue culture. This is a grant funded position. Send résumé to: J. M. Coutts, Yale University, Department of Human Resources, 155 Whitney Avenue, P.O. Box 1404, Yale Station, New Haven, CT 06520. *Yale University is an Affirmative Action/Equal Opportunity Employer.*

3 JULY 1987

MOLECULAR VIROLOGIST

Picornavirus Research

The Sterling-Winthrop Research Institute is currently seeking a senior level molecular virologist to join its multidisciplinary antipicornavirus drug discovery and development program. The successful candidate will be expected to supervise and coordinate both intramural and extramural research programs devoted to the rational design of novel antipicornaviral drugs based on crystallographic, sequence, and antiviral screening data.

Requirements include a Ph.D. in Microbiology or Molecular Biology with a minimum of 2-5 years post-doctoral training. Candidates should have extensive experience working with picornaviruses, preferably with specific experience in the preparation of infectious cDNAs and site-directed mutagenesis. This high visibility position requires a creative, self-motivated, articulate individual possessing high internal standards for research excellence.

We offer an attractive salary and benefits package with the opportunity for professional growth. The Institute is located near Albany, New York which is a center for summer and winter recreational activities.

Please send resume to:

Ms. Randy E. Goldfischer, Employee Relations Administrator



STERLING-WINTHROP RESEARCH INSTITUTE

Sterling Research Group
A Division of Sterling Drug Inc.

Columbia Turnpike, Rensselaer, NY 12144

Equal Opportunity Employer M/F/H/V

VISITING SCIENTIST Molecular Neurobiology

Two postdoctoral Visiting Scientist positions are open within the Medical Products Department at Du Pont's Experimental Station in Wilmington, DE. The successful candidate will conduct innovative, basic research with transgenic mice or participate in the cloning of cellular receptors. Candidate should possess a Ph.D. and one or more years of experience in Biochemistry or Cellular/Molecular Biology. The appointment will be for one year, renewable for a second year upon mutual agreement.

At the world renowned Du Pont Company, you'll find a highly stimulating scientific environment in addition to an excellent salary. To be considered, please send resume, bibliography, and references by July 31, 1987 to: Dr. Leonard G. Davis, E.I. Du Pont de Nemours and Company, Experimental Station, E400/3426, Wilmington, DE 19898.



*U.S. Citizenship required.
An Equal Opportunity Employer M/F/H/V*

POSITIONS OPEN

ENERGY/ENVIRONMENT POLICY ANALYST—Duties: As a specialist in energy economics and planning in industrialized and developing countries, the successful candidate will evaluate and compare impact of energy use changes and policy measures in various European, African, Latin American and Middle Eastern countries; elaborate econometric models using statistical software packages, and develop national and international scenarios on the evolution of energy demand; determine trends in the evolution of end-use energy technologies in both industrialized and developing countries. Tasks require utilization of local languages for collecting and selecting original information, re-evaluation and modification of existing data, and elaborate data systems using commercial software packages. Production of written reports and publications is also required. As Principal Investigator, set priorities and supervise junior staff; market program among current and new sponsors. Requirements: Familiarity with worldwide databases on energy use; knowledge of economic statistics and statistical analysis routines on computer; significant experience with analysis of energy use and conservation impacts; exposure in seeking funding support for research. Fluency in at least two languages besides English (French, Italian, German, Spanish, Scandinavian, or Japanese). Master's degree in energy-related discipline (economics, architecture, or energy resources). Job site/interview: Berkeley, California. Send this ad and a résumé to: **Job # DC-5287, P.O. Box 9560, Sacramento, CA 95823-0560** not later than 20 July 1987.

FACULTY POSITION IN PALEONTOLOGY UNIVERSITY OF CALIFORNIA, BERKELEY

The Department of Paleontology invites applications for a tenured faculty position (associate professor or professor) beginning the 1988 to 1989 academic year. The teaching and research interests of the candidate can be in any area of paleontology. Teaching responsibilities will include participation in the core undergraduate program and in the area of research specialty at the graduate level. Applicants should send curriculum vitae, statement of research and teaching objectives, relevant reprints and manuscripts, and the names and addresses of three references to: **Chairman, Paleontology Search Committee, Department of Paleontology, University of California, Berkeley, CA 94720.**

As part of the reorganization of the biological sciences at Berkeley, the Department of Paleontology will soon be incorporated into a new Department of Integrative Biology.

Closing date for receipt of applications: 15 September 1987.

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

FACULTY POSITION: Department of Pharmaceutical Sciences, University of Arizona invites applications for a tenure-track position at the assistant professor level, available January 1988. We seek an investigator who can apply modern biotechnology to the design and synthesis of drugs or studies on their mode of action. Possible areas include but are not limited to NMR, molecular mechanics/graphics, drug-receptor binding, biopolymer structure and function, and monoclonal antibodies. Teaching responsibilities include undergraduate and graduate level courses in medicinal chemistry. Send curriculum vitae and three letters of recommendation to: **Dr. William A. Remers, Chairman, Search Committee, Department of Pharmaceutical Sciences, College of Pharmacy, University of Arizona, Tucson, AZ 85721.** An Affirmative Action/Equal Opportunity Employer.

FLOW CYTOMETRY FACILITY COORDINATOR: We are looking for an experienced person to run our multiuser facility. Preference will be given to a person with 1 to 2 years of experience in running such a facility, preferably one in which a dual laser Cytofluorograf plus 2150 computer system was used. Our facility coordinator interacts with faculty and staff from departments in the Colleges of Medicine, Agriculture, and Arts and Sciences. Salary is competitive and dependent upon experience. The University has an excellent fringe benefits package. Send résumé and letters of reference to: **Dr. Warren I. Schaeffer, University of Vermont, Department of Microbiology, Given Building, Burlington, VT 05405.** The University of Vermont is an Equal Opportunity Employer.

POSITIONS OPEN

FACULTY POSITION MCGILL UNIVERSITY

Applications are invited from molecular biologists for a full-time tenured/tenure-track academic position in the Department of Microbiology and Immunology at a level commensurate with experience. Applicants should have a Ph.D. and postdoctoral experience preferably related to the molecular biology of the immune system. The successful candidate will be expected to establish an independent research program and be open to interactions with molecular and cell biologists/immunologists within the department. *In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada, although others are encouraged to apply.* Candidates should submit curriculum vitae, including a list of publications, a description of research interests, and names of three individuals who can serve as references to: **Dr. Robert A. Murgita, Professor and Chairman, Department of Microbiology and Immunology, McGill University, 3775 University Street, Montreal, Quebec, H3A 2B4.**

M.D. OR Ph.D. POSTDOCTORAL POSITION available immediately for work on molecular biology of AIDS virus (HIV) and hepatitis B virus. Experience in DNA cloning with lambda vectors is essential. Send curriculum vitae and three references to: **Dr. W. S. Robinson at Stanford University Medical Center, Room S-128, Stanford, CA 94305-5701.**

MEDICAL PHYSICIST/DOSIMETRIST (RADIATION). Successful candidate will be responsible for clinical radiation physics and assists the radiation therapist/oncologist with patient treatment planning. Dosimetry, safety, hyperthermia, and treatment device design. Works closely with RAI Committee and interfaces with manufacturers and service organizations for equipment calibration. Assists and/or directs various activities related to research and radiation therapy. Requires 7 years of postgraduate experience, education and training as a radiation physicist/dosimetrist, including 1 year of training or education in nuclear medicine and radiation safety. Training and experience in operation of BSD 1000 hyperthermia equipment, ADAC treatment planning computer, Varian 6-100 Linear Accelerator, total body irradiation, magnetic resonance imaging, and Board eligibility. Masters degree in nuclear medical health; physics. Forty hours per week, \$42,000 per annum. **E. R. Robinson, Alabama State Employment Service, 1816 8th Avenue, North, Birmingham, AL 35203.** Job Order # AL0925200.

MICROBIOLOGIST FULL PROFESSOR AND CHAIR

The University of California at Davis invites applications and nominations for Chairperson of the Department of Bacteriology. Candidates must have active research programs with outstanding records of research achievement in prokaryotic physiology/genetics. The chairperson will be responsible for providing academic and administrative leadership to promote the research and teaching excellence of the Department.

The Department offers undergraduate degrees, and serves as the administrative core of the graduate group in microbiology, a campus-wide unit which offers Master's and Ph.D. degrees. With anticipated new positions, the departmental faculty will build on its traditional strength in prokaryotic physiology/genetics while expanding in eukaryotic microbiology.

For the initial application, candidates should submit curriculum vitae, a synopsis of their current research program (including present and pending grant support and current personnel), representative recent publications, and a statement of teaching and administrative experience to: **Chair of the Search Committee, Department of Bacteriology, University of California, Davis, CA 95616.** Closing date: Open until filled, but applications must be received before 1 October 1987 to be assured of consideration. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

MICROBIAL GENETICIST— MOLECULAR BIOLOGIST DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY EASTERN VIRGINIA MEDICAL SCHOOL

Applications are invited for tenure-track assistant or associate professor position. Candidates must have Ph.D., postdoctoral experience, and evidence of outstanding research achievements in the field of microbial genetics and molecular biology. We are particularly interested in those individuals that have complete knowledge and expertise in recombinant DNA technology (including construction of cDNA and genomic DNA libraries, plasmid cloning/subcloning, blot hybridization and DNA sequencing) and are using these techniques to study the molecular mechanisms of microbial pathogenesis. The successful candidate will be encouraged to spend 70% or more in research and collaborate with other basic and clinical faculty. Limited but active participation in teaching basic bacteriology and molecular biology to medical and graduate students required. The department is undergoing a major growth phase with emphasis on molecular and cellular mechanisms of pathogenesis and oncogenesis that include excellent incentives. Eastern Virginia Medical School is located within the lovely harbor district of Norfolk, Virginia, and is only minutes away from the Chesapeake Bay and Atlantic Ocean. Send curriculum vitae, three letters of reference, and a description of your present and future research studies to: **George L. Wright, Jr., Ph.D., Professor and Chairman, Department of Microbiology and Immunology, Eastern Virginia Medical School, P.O. Box 1980, Norfolk, VA 23501.** An Affirmative Action/Equal Opportunity Employer.

NORTHERN STATE MICROBIOLOGIST POSITION

Northern State is seeking a first-rate microbiologist with strong background in medical microbiology and immunology. Ph.D. required. Assistant professor rank, tenure-track. To begin in August for fall term or January for spring term. Teaching responsibilities include general biology, general microbiology, physiology, medical microbiology and immunology. Successful candidates must show record of excellence in teaching, promise in scholarship and research, commitment to service. Send application letter with résumé and three letters of reference (or names, addresses and telephones) to: **Dr. Thomas Flickema, V.P.A.A., Northern State, Aberdeen, SD 57401.** Review of applications will begin 24 July 1987. Applications will be accepted until the position is filled. *Northern State is an Equal Opportunity/Affirmative Action Employer.*

MOLECULAR BIOLOGIST—CANCER DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY EASTERN VIRGINIA MEDICAL SCHOOL

Applications are invited for tenure-track associate or assistant professor positions. Candidates must have Ph.D., postdoctoral experience, and evidence of outstanding research achievements in the field of molecular biology as it applies to the study of cancer. We are particularly interested in individuals applying the techniques of recombinant DNA techniques (including construction of cDNA and genomic DNA libraries, plasmid cloning, blot hybridization, DNA sequencing, oncogenes and cytogenetics) to study the molecular mechanisms of neoplasia. The successful candidate will be encouraged to spend 70% or more in research and collaborate with other basic and clinical faculty. The selected individual will also play a key role in the establishment of the Molecular Cell Biology Laboratory. Limited but active participation in teaching molecular biology to medical and graduate students is required. The department is undergoing a major growth phase with a focus on cancer research that includes excellent incentives. Eastern Virginia Medical School is located within the lovely harbor district of Norfolk, Virginia, and is only minutes away from the Chesapeake Bay and Atlantic Ocean. Send curriculum vitae, three letters of reference, and a description of your present and future research studies to: **George L. Wright, Jr., Ph.D., Professor and Chairman, Department of Microbiology and Immunology, Eastern Virginia Medical School, P.O. Box 1980, Norfolk, VA 23501.** An Affirmative Action/Equal Opportunity Employer.



Sungene

is expanding

Sungene Technologies Corporation, an established plant biotechnology company in the San Francisco Bay Area, is expanding its staff of Scientists to conduct research in the areas of:

- **Plant Tissue Culture** involving protoplast isolation, transformation, callus induction, plantlet regeneration and in-vitro selection in agronomic crops.
- **Plant Lipid and Protein Biochemistry** using enzymological and analytical approaches as well as collaboration with cell biologist and plant breeding station scientist.
- **Molecular Biology** including nucleic acid manipulation involving the identification, isolation, expression and regulation of genes in plant systems.

Ideal candidates will have an advanced degree, 3+ years experience and an interest in working in an organization with a strong technical and commercial orientation.

Sungene Technologies offers excellent salary, benefits, relocation and stock option plans. Please send resume with references to:

John Kelley
Sungene Technologies Corporation
3330 Hillview Avenue
Palo Alto, CA 94304

BS/MS Scientist/ Mass Spectrometry

The Department of Drug Metabolism of Smith Kline and French Laboratories, located in suburban Philadelphia, PA is seeking qualified applicants to join a collaborative and expanding Bioanalytical Research Group. The successful candidate will: be responsible for the operation and maintenance of quadrupole and magnetic sector mass spectrometers; participate in the study of the metabolism of novel pharmaceutical agents in laboratory animals and man; assist in the elucidation of the mechanism of formation of novel metabolic products; participate in the basic research programs in drug development; and publish the results in scientific literature.

Candidate qualifications will include:

- B.S. or M.S. in Analytical Chemistry, Chemistry, Biochemistry or related area plus 1-3 years experience in an analytical laboratory.
- Experience in the daily operation and maintenance of quadrupole and/or magnetic sector mass spectrometers.
- Experience in the HPLC isolation of "trace" quantities of organic compounds.
- Experience in the isolation and identification of drug metabolites is preferred.
- Knowledge of NMR analysis desirable.
- Proven research ability evidenced by scientific publications preferred.
- Excellent communication and interpersonal skills required.

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. Please forward your C.V. and the names of three references to: Mary Ann McCarry-C0027, Smith Kline & French Laboratories, Research & Development, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.



SK&F
A SmithKline Beckman Company

POSTDOCTORAL RESEARCH ASSOCIATE

THE LOS ALAMOS NEUTRON SCATTERING CENTER has an opening for a Postdoctoral Research Associate to conduct research in small-angle neutron scattering techniques. Candidates should have a Ph.D. in physics or chemistry with a strong background in theoretical or experimental structure determination in chemistry or materials science. Experience in the use of computers for data analysis or modeling is essential. Candidates with experience in scattering techniques will be considered most favorably. The salary range is \$31,260 to \$32,940 per year with a generous benefits package. For additional information, please contact Dr. Rex P. Hjelm, LANSCE, MS H805, Los Alamos National Laboratory, Los Alamos, NM 87545; (505) 667-6069.

TO FORMALLY APPLY, send resume, list of publications, undergraduate and graduate transcripts, and three letters of reference to Carol Rich, Human Resources Development Division POSTDOC-U, Los Alamos National Laboratory, MS P290, Los Alamos, NM 87545.

An Affirmative Action/Equal Opportunity Employer operated by the University of California for the Department of Energy.



CHAIRPERSON DEPARTMENT OF ANATOMICAL SCIENCES THE UNIVERSITY OF OKLAHOMA COLLEGE OF MEDICINE

The College of Medicine of the University of Oklahoma Health Sciences Center invites applications and nominations for the position of chairperson of the Department of Anatomical Sciences. The successful candidate will have the opportunity to build a nationally recognized department and to recruit new faculty. Applicants must have a Ph.D., M.D. or equivalent degree, and recognized success in research, teaching, academic administration and leadership. Any relevant research background will be considered, but expertise in the neurosciences is of special interest.

Interested parties should submit a letter of application, curriculum vitae and bibliography, a summary of accomplishments and goals, and the names of at least three references no later than October 1, 1987 to: Robert D. Foreman, Ph.D., Professor and Chairman, Department of Physiology and Biophysics, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, Oklahoma 73190. An Equal Opportunity/Affirmative Action Employer. U.S. citizenship or eligibility for U.S. citizenship required for employment.

POSITIONS OPEN

MOLECULAR IMMUNOLOGIST— BIOCHEMIST— CELL BIOLOGIST

The Laboratory of Immunology, of the National Institute of Allergy and Infectious Diseases, National Institutes of Health (NIAID/NIH), Public Health Service, intends to make an appointment at the independent scientist level. Individuals with interests and training in membrane biochemistry or cell biology are particularly sought but all qualified candidates are encouraged to apply. The successful candidate will be expected to conduct a program of independent research and will be appointed at a level appropriate to scientific qualifications. Contact: **Dr. William Paul, Building 10, Room 11N311, NIAID/NIH, 9000 Rockville Pike, Bethesda, MD 20892; telephone: 301-496-5046.** U.S. citizenship required. *An Equal Opportunity Employer.*

Ph.D. CLINICAL VIROLOGIST: North Shore University Hospital, a teaching center of Cornell University Medical College, is seeking a Director for T. Jane & Dayton T. Brown virology Laboratory. The candidate should be a Ph.D. virologist with interest in clinical virology and retrovirology who is qualified to direct a clinical laboratory and is preferably ABMM certified or eligible in virology or equivalent. Ability to carry out independent research is preferred, full facilities available. An academic appointment will be given at a rank dependent on qualifications. Excellent interaction with academic Infectious Disease Unit. Excellent salary and opportunity for academic growth. Send résumés to: **Personnel Department, North Shore University Hospital, 300 Community Drive, Manhasset, NY 11030.** *We are an Equal Opportunity Employer.*

Ph.D. CYTOGENETICIST—Serve as Lab Director of a growing lab (1,000 samples per year) at Arkansas Children's Hospital, a major teaching affiliate of the University of Arkansas for Medical Sciences. Faculty appointment in departments of pathology and pediatrics, commensurate with experience, available if desired. Board certification/eligibility with at least 2 years of experience preferred. Position available immediately. Send résumé to: **Department SC, Personnel Department, Arkansas Children's Hospital, 800 Marshall Street, Little Rock, AR 72202-3591.** For further information contact: **Royce Joyner, M.D. at 501-370-1306.** *Equal Opportunity Employer.*

PHYSICAL OCEANOGRAPHER/NUMERICAL MODELER—The University of Delaware College of Marine Studies invites applications for a 12-month, tenure-track faculty position in physical oceanography. Applicants should have a Ph.D. in physical oceanography or a related field, with experience in computer modeling of oceanic or atmospheric processes. The successful applicant will be encouraged to develop an independent research program which may include collaboration with other physical oceanographers in the College. The College has an active group of physical oceanographers involved with field and model studies, laboratory experimental work, and historical data analysis. Facilities available include an IBM 3081D computer with terminal access on both campuses, and high-speed access from both Lewes and Newark campuses to national computer networks. Teaching at the graduate level will be required and the successful candidate will be expected to develop a funded research program involving graduate students. It is anticipated that the appointment will be at the assistant professor level, but applications from more senior persons are welcome. Applicants should send curriculum vitae, pertinent reprints, and the names of three references by 31 August 1987 to the chairman of the search committee: **Dr. Charles Epifanio, College of Marine Studies, University of Delaware, Lewes, DE 19958, 302-645-4267.** *The University of Delaware is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION: Available 1 September 1987, to study the molecular biology of lipoteichoic acid in bacterial cell surface assembly [*J. Bact.* 169:1702 (1987)]. Recent Ph.D. in either microbiology or biochemistry. Experience in molecular biology desired. Send résumé and names of three references to: **F. C. Neuhaus, Ph.D., Department of Biochemistry, Molecular Biology and Cell Biology, Northwestern University, 2153 Sheridan Road, Evanston, IL 60201.** *An Equal Opportunity/Affirmative Action Employer.*

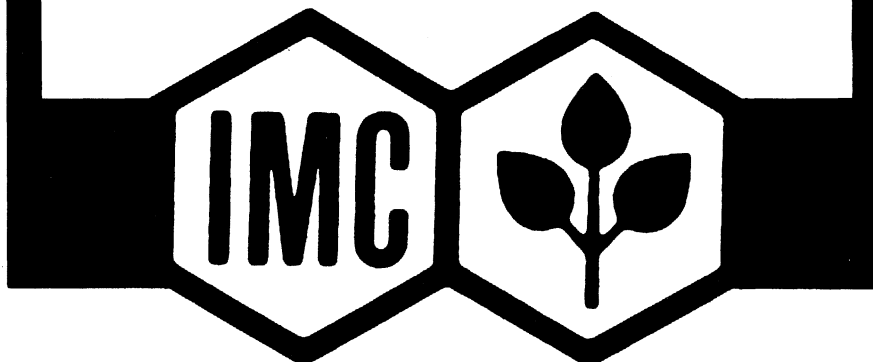
TOXICOLOGIST

International Minerals & Chemical Corporation, a diversified Fortune 300 company, is a leading producer and supplier of products for animal health, growth and nutrition.

We are presently seeking an experienced Toxicologist to work in our corporate research laboratories in Northbrook, Illinois, a northwest suburb of Chicago. The successful candidate will have a Ph.D. in toxicology, biology, pharmacology or a related field and at least two years of experience which includes working with isotopes and a strong knowledge of statistics.

This individual will be responsible for planning toxicity studies, writing protocols, interpreting results, and writing final reports. In addition, this person will handle environmental toxicology, supervise in-house and contract studies and prepare documents for submission to the FDA as needed. Strong writing and oral presentation skills are essential for this position.

If you have demonstrated expertise in toxicology and would like to become a part of an expanding research effort with a growth oriented company, IMC can offer you a competitive salary, excellent benefits and a dynamic research work environment. We invite you to reply in confidence to: **Debra N. Gold, International Minerals & Chemical Corporation, 421 East Hawley Street, Mundelein, Illinois 60060.** All applicants must be prepared to document authorization to work in the U.S. IMC is an Equal Opportunity/Affirmative Action Employer.



INDIANA UNIVERSITY
Bloomington, IN 47405

Announcement of Vacancy

**DEAN, COLLEGE OF ARTS AND SCIENCES
Indiana University**

We invite nominations and applications for the position of Dean of the College of Arts and Sciences, Indiana University, Bloomington, to assume office on or before July 1, 1988. The College of Arts and Sciences is the largest and most extensive academic unit in Bloomington, the major campus of the university. The College comprises 40 academic departments and 20 interdisciplinary programs. Doctoral degrees are offered in 49 areas, many of which are ranked among the best in the nation. The College has a full-time faculty of more than 750, a current undergraduate major enrollment of 7,100, and a graduate enrollment of 2,800 through the Graduate School. The College also interacts with other academic units on the Bloomington campus.

The Dean is the chief administrator of the College and reports directly to the Vice President of the Bloomington campus. The Dean is responsible for the instructional programs of the College, the development and enhancement of College faculty strengths, and the formulation and execution of College budgetary policies. The Dean has a unique opportunity to shape undergraduate and graduate education and to foster research on the Bloomington campus. The Dean at Indiana University enjoys more than the typical amount of autonomy.

Candidates for the Deanship should be able to demonstrate a commitment to and an understanding of all aspects of the educational enterprise. They should have a record of outstanding scholarship and successful administrative performance. We seek a creative, dynamic, and innovative leader who is dedicated to excellence.

In keeping with its commitment to affirmative action, Indiana University particularly seeks information about, or an expression of interest from, minority or women candidates. Applications and nominations received by August 15, 1987 are assured of consideration.

Please direct nominations and inquiries to:

James C. Craig
Search and Screen Committee
Department of Psychology
Indiana University
Bloomington, IN 47405
(812) 335-3926

**NATIONAL INSTITUTE ON AGING
National Institutes of Health
Public Health Service**

The Laboratory of Neurosciences, National Institute on Aging, National Institutes of Health, invites applications for a Fellowship position to study the pharmacokinetics and cerebral metabolism of central nervous system agents. Research will involve: (1) methods development for the quantitation of drugs and metabolites in plasma and tissue, (2) relating pharmacokinetic data to brain imaging results, and (3) molecular modification of drugs to enhance their brain penetration. The position is that of a Fellow with a salary range of \$17,000 to \$47,788 per annum commensurate with qualifications, and is located in Bethesda, Maryland.

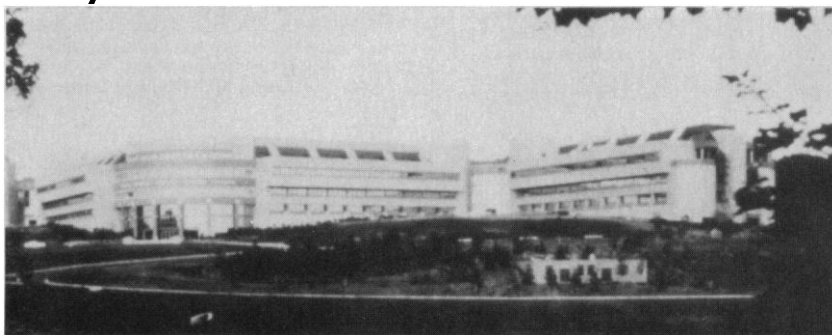
Experience in high performance liquid chromatography, gas chromatography and mass spectrometry is desirable.

Applications are invited from individuals having a Ph.D. in Pharmacology or a Chemistry discipline. Interested candidates should submit their Curriculum Vitae to **Stanley I. Rapoport, M.D., Chief, Laboratory of Neurosciences, National Institute on Aging, Building 10, Room 6C 103, 9000 Rockville Pike, National Institutes of Health, Bethesda, Maryland, 20892, USA.**

An Equal Opportunity Employer

Cardiovascular Clinical Research

Bristol-Myers has made
a multi-million dollar commitment
to your future



OUR WALLINGFORD, CONNECTICUT WORLD HEADQUARTERS for pharmaceutical research opened in 1986, signaling the start of our second century. Designed by scientists for scientists, this state-of-the-art environment fosters interaction across many disciplines and rewards individual achievement. Activities in Wallingford are aimed at the discovery and development of new therapeutic agents in 4 key areas: anti-cancer, central nervous system, cardiovascular, and anti-infective research. Immediate opportunities are available for:

PHYSICIANS

Entry level and senior physicians to join team responsible for worldwide clinical program focused on new drugs for major cardiovascular diseases: arrhythmias and sudden cardiac death, congestive heart failure, myocardial salvage, angina pectoris, and atherosclerosis. Three to five years experience in pharmaceutical cardiovascular clinical research required for Director's position. Board certification in Internal Medicine highly desirable; training in Clinical Pharmacology is advantageous.

PHARMACEUTICAL SCIENTIST

Participating on a clinical project team, you'll plan, analyze, and report results of phase I clinical trials and subsequently assume increased responsibility for multicenter trials during development phases II-III. Relevant PhD or PharmD required. Training and experience in clinical pharmacokinetics highly desirable.

CLINICAL RESEARCH MONITORS

As part of the clinical team you will travel to investigative sites at major hospitals, university and academic centers in the U.S. and Canada, interacting directly with professional staff to initiate, monitor and assess progress of clinical trials of investigational cardiovascular drugs. Minimum of Bachelor's degree required. Cardiovascular nursing or pharmacy background is highly desirable.

BRISTOL-MYERS is a multi-billion dollar global competitor that pursues excellence in pharmaceutical research and development. Our strong, sustained growth, highly competitive salaries, extensive benefits and career support have helped us attract and keep the best people. Located in the Connecticut countryside, we are close to the resources of New Haven, New York and New England.

TO EXPLORE YOUR FUTURE on the leading edge of pharmaceutical research, send resume with salary history, noting position of interest to: **BRISTOL-MYERS COMPANY, Pharmaceutical Research & Development Division, Attn: T27, P.O. Box 5100, 5 Research Parkway, Wallingford, CT 06492.**

An equal opportunity employer.

Bristol-Myers

POSITIONS OPEN

PLANT SYSTEMATICS AND ECOLOGY

The University of Virginia seeks a plant biologist with credentials in systematics and ecology to be appointed research assistant professor beginning as early as 1 January 1988. This individual will serve as Curator of the Orland E. White Arboretum and be expected to develop a field research program in plant ecology or evolution. The Orland E. White Arboretum is the State Arboretum of Virginia. It is located at the University's Blandy Experimental Farm near Winchester, Virginia, approximately 90 miles from the University. The Arboretum is comprised of over 6000 specimens including 1000 species and varieties of woody plants. On-site facilities include: residences, a library, laboratories, computers, and greenhouses. Other faculty associated with the facility have research interests in plant-animal interactions [E. F. Connor (insects) and M. A. Bowers (mammals)]. Residence at this facility is required and interaction with faculty and students at the University is expected. Twelve-month salary with an initial 3-year contract will be provided. A Ph.D. is required. Applicants should submit curriculum vitae, reprints, a statement of research interests, and three letters of reference by 1 October to: **Dr. Edward F. Connor, Director, Blandy Experimental Farm and Orland E. White Arboretum, Department of Environmental Sciences, Clark Hall, University of VA 22903. The University of Virginia is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION. Ph.D. BIO-CHEMIST immediately available to study interaction of protein kinase C with components of hormone sensitive adenylate cyclase. Experience with cyclic nucleotides, cell culture, protein phosphorylation and hormone receptors desirable. Starting salary \$25,000 per year. Position guaranteed minimum 2 years. Submit curriculum vitae to: **Dr. Sorel Sulimovici, Nassau County Medical Center, 2201 Hempstead Turnpike, East Meadow, NY 11554.** Major teaching hospital of SUNY, Stony Brook.

POSTDOCTORAL POSITION presently available for cellular immunologist to work on T-cell regulation of mouse IgA responses. Opportunity to prepare and work with T-cell clones and hybridomas. Applicant must be U.S. citizen, permanent resident or non-citizen national, eligible for NIH stipend support at a level from 0 to 5 years postdoctoral. Compensation level commensurate with previous training and experience. Submit curriculum vitae and the names, addresses, and telephone numbers of three references to: **Dr. Julia M. Phillips-Quagliata, Department of Pathology, New York University Medical Center, 550 First Avenue, New York, NY 10016.**

POSTDOCTORAL PHARMACOLOGIST

Needed immediately for NIH-funded position on research into alpha-1-adrenergic receptors and control of cellular calcium metabolism. Experience with isolated tissues, isolated cells, and/or tissue culture helpful.

Send curriculum vitae and names of three references by 15 August 1987 to:

**Kenneth P. Minneman, Ph.D.
Department of Pharmacology
Emory University School of Medicine
Atlanta, GA 30322**

Affirmative Action/Equal Opportunity Employer

POSTDOCTORAL POSITION available immediately in mammalian neurogenetics to study development and degeneration of the retina using mutant and chimeric mice. Background in monoclonal antibody production and retinal development extremely desirable. Send curriculum vitae and names of three references by 1 August 1987 to: **Dr. Richard J. Mullen, Department of Anatomy, University of Utah School of Medicine, Salt Lake City, UT 84132. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITION available in fungal physiology. Areas of research include synthesis and assembly of fungal cell wall components. Experience in fungal physiology and biochemistry preferred. Send curriculum vitae, statement of research interests, and the names, addresses, and telephone numbers of three references to: **Dr. Vicente D. Villa, Biology Department, Southwestern University, Georgetown, TX 78626.**

POSTDOCTORAL POSITION available immediately to study the molecular biology and gene transfer of antifreeze proteins and fish pituitary hormones. Prior background in molecular biological and/or cell culture techniques preferred. The laboratory has an excellent set-up in protein chemistry and molecular biology, including protein sequencers, DNA and peptide synthesizers, HPLC and FPLC. Please send curriculum vitae and the names of three references to: **Dr. Choy L. Hew, Department of Clinical Biochemistry, Banting Institute, University of Toronto, Toronto, Ontario, Canada, M5G 1L5.**

POSTDOCTORAL POSITION to study the molecular mechanism of (i) calcium transport in bacteria or (ii) plasmid-mediated arsenical resistance and transport. Individuals with a Ph.D. in membrane biochemistry or molecular biology can send a curriculum vitae and the names of three references to: **Dr. Barry P. Rosen, Chairman, Department of Biochemistry, Wayne State University School of Medicine, Scott Hall of Basic Medical Sciences, 540 East Canfield, Detroit, MI 48201. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION now available for person experienced in protein biochemistry or cloning. Opportunity to participate in study of transmembrane signal transduction involving phosphoinositides. Send curriculum vitae and names of three references to: **Dr. O. Hayes Griffith, Institute of Molecular Biology, University of Oregon, Eugene, OR 97403. UO is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available immediately for multidisciplinary project studying the therapeutic potential for porphyrins and related macrocycles for photodynamic therapy of tumors. A Ph.D. in biochemistry or pharmacology preferred, with cell biology preferred, with cell biology background. Experience with general biochemical techniques and various types of chromatography (HPLC, TLC) needed. Porphyrin methodology a great plus. Send curriculum vitae and names, addresses, and telephone numbers of three references to: **Dr. Martha Kreimer-Birnbaum, Director, Research Department, St. Vincent Medical Center, 2213 Cherry Street, Toledo, OH 43608.** St. Vincent Medical Center is an affiliated teaching hospital of the Medical College of Ohio. *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION available immediately to join a group of nutritional biochemists studying the effects of dietary carbohydrates on various aspects of copper and iron metabolism. Applicant should have a Ph.D. in biochemistry or related science, and expertise in use of molecular biology techniques. Send curriculum vitae and names of three references to: **Dr. Mark Failla, Vitamin and Mineral Nutrition Laboratory, BHNRC, Building 307, Room 205, BARC-East, U.S. Department of Agriculture, Beltsville, MD 20705. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION with USDA, Agricultural Research Service available immediately for **MOLECULAR BIOLOGIST/BIOCHEMIST** to join group studying expression of wheat storage protein genes. Project includes construction of synthetic and modified genes for introduction into heterologous and homologous expression systems. Experience desired in some of the following: molecular biology; protein chemistry; yeast metabolism; plant tissue culture. Salary range GS-11, \$27,172/GS-12, \$32,567 per annum. Must be U.S. citizen. For information on the research program contact: **Dr. Olin Anderson (415-486-3620), Western Regional Research Center, ARS, U.S. Department of Agriculture, 800 Buchanan Street, Albany, CA 94710.** For application procedures/forms, contact: **Rita Millard at 301-344-3138.** Applications in response to this ad must be marked 7W018. *The USDA is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION AVAILABLE

Available for 1 to 2 years, beginning September to December 1987 for research in cellular neurobiology. Must be knowledgeable in voltage and patch clamp and some molecular biology techniques. Previous experience desirable. Stipend dependent on postdoctoral experience. Send curriculum vitae and three references to: **Dr. Wilfried F. H. M. Mommaerts, Department of Physiology, School of Medicine, University of California, Los Angeles, CA 90024-1751.**

An Affirmative Action/Equal Opportunity Employer. Minority and women candidates are encouraged to apply.

POSTDOCTORAL POSITION INSULIN ACTION AND RECEPTOR REGULATION

Position available immediately to study insulin resistance [JBC 262, 189 (1987)] and insulin-receptor processing [JBC 260, 13524 (1985)] in primary cultured adipocytes. Experience in SDS-PAGE and cell culture desirable. Newly remodeled, fully equipped laboratories. Please send curriculum vitae, three letters of reference and reprints to: **Dr. Stephen Marshall, University of Tennessee, Memphis, Department of Biochemistry, Memphis, TN 38163.**

POSTDOCTORAL POSITION: DIRECTED MUTAGENESIS STUDY OF ENZYME ACTIVE SITE RESIDUES. Applications are invited for a postdoctoral position currently available in a team studying the role of enzyme active site residues in binding of substrates and inhibitors, in the catalytic mechanism and in equilibria between conformers. Techniques used to characterize mutant enzyme include stopped-flow fluorimetry and spectrophotometry and FT-NMR. Applicants should have a strong background in enzymology and experience with the relevant techniques is an advantage. Salary: \$20,000 to \$24,000, depending on experience. Position renewable up to 3 years. Send curriculum vitae and three letters of recommendation to: **Dr. Raymond L. Blakley, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION. Ph.D. in physical chemistry or chemical physics with experience in molecular photophysics. Characterization of transients of photoexcited molecules of biologic and medicinal interest by measurement of transient spectra, lifetimes, and yields. One to two years of previous postdoctoral experience desirable. Send résumé to: **Dr. Tayyaba Hasan, Wellman Laboratories, Harvard Medical School, Massachusetts General Hospital, Boston, MA 02114.**

POSTDOCTORAL POSITION available for molecular biologist. Project involves cloning and expressing viral genes coding for protectively immunizing antigens in infectious vaccinia virus recombinants and other viral vectors, leading to the development of livestock vaccines. Salary to \$27,000 plus benefits, depending on qualifications. Support available for at least 2 years. Send résumé, relevant publications, and three letters of reference to: **Tilahun Yilma, VM Microbiology and Immunology, University of California, Davis, CA 95616; Telephone: 916-752-8306.** Offer of employment is conditional subject to presentation of documented evidence of personal identification and U.S. citizenship or your right to work in the U.S. as required by federal law (Immigration Reform and Control Act 1986). *The University of California is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION available to join a multidisciplinary group (directed by **S. Williams** and **B. Jarrell**) to study interaction of human adult endothelial cells with native and synthetic vascular grafts. Both in vitro and in vivo techniques will be used to evaluate the endothelialization process. Individuals with a background in cell biology and/or cardiovascular physiology should send curriculum vitae and the names of three references to: **Stuart K. Williams, Ph.D., Department of Surgery, Jefferson Medical College, Room 604-A, Philadelphia, PA 19107. An Equal Opportunity Employer.**

SCIENTISTS MEDICAL DIAGNOSTIC PRODUCT DEVELOPMENT/ CLINICAL INVESTIGATIONS

Ortho Diagnostic Systems Inc., a Johnson & Johnson company, has for almost half a century made valuable contributions to the medical profession with the manufacture of diagnostics, reagents, immunologicals and related products. We continually look for individuals in the following disciplines who can effectively perform in this professional and challenging environment.

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- * Bio-Organic Chemistry
- * Microbiology/Infectious Disease
- * Protein Chemistry/Biochemistry

Senior Scientist level positions require a PhD or equivalent. Scientist level positions require a PhD or MS degree or equivalent. Assistant Scientist level positions require an MS or BS degree or equivalent. Related experience is required in one or more of the above disciplines. Additional experience specific to the development of diagnostic products or clinical investigations is desirable.

Ortho Diagnostic Systems Inc. offers competitive salaries and an attractive benefits package including a dental plan and tuition reimbursement. Qualified candidates are encouraged to send their resume and salary history, in confidence to: **Employment Office, Box X.**



Ortho Diagnostic Systems Inc.

Route 202, Raritan, NJ 08869

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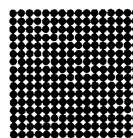
Behavioral Pharmacologist BS/MS

Pfizer's expanding commitment to Neuroscience research has created a career opportunity for an MS or BS level scientist. You will join a multifaceted research team studying a variety of mental diseases and CNS disorders. A Master's degree or two years post-Bachelor's degree experience in an animal behavioral sciences laboratory is required. You will be responsible for designing and performing experiments and for data analysis. A demonstrated ability to work independently, and effectively summarize and communicate results, is necessary. Experience with or understanding of neurochemical techniques would be helpful.

In addition to a stimulating scientific environment, we offer a competitive compensation/benefit package and relocation assistance to an attractive southeastern Connecticut shore community. Please send a resume, description of research experience and names of three references to: Mrs. Lorraine Corr, Personnel Associate, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.



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CHIRON
CORPORATION

Chiron, a recognized leader in the biotechnology industry, has a position available immediately as a **Protein Purification Manager** in the Manufacturing Division.

The successful candidate will be responsible for planning, organizing and supervising the recovery and purification of proteins in the Protein Purification area of Manufacturing.

Applicants should have a Bachelor's degree in Biochemistry or Biochemical/Chemical Engineering or a related area, and 6 years or more of experience. Requirements include in-depth knowledge of protein purification techniques and cGMP operations. Good management and interpersonal skills will be necessary as well as the ability to troubleshoot and solve a variety of problems ranging from technical to general procedures.

The Protein Purification Manager is accountable for the production of high quality cGMP materials, for the prompt completion of production records, prompt alerting of management of impending problems and the efficient use of allocated personnel and resources.

Please submit a curriculum vitae with a description of relevant interest and experience together with the names of three references. **Send to: Ms. Diana Wyles, Chiron Corporation, 4650 Horton Street, Emeryville, California USA 94608.**

U.S. PUBLIC HEALTH SERVICE EPIDEMIOLOGY TRAINING PROGRAM

1988

Applications are invited for a training program in medical epidemiology. Successful candidates will be appointed as USPHS Service Fellows (a non-tenured, junior professional civil service classification). Applications must be received by September 8, 1987, to be considered for the period to begin approximately July 1, 1988.

For most successful applicants this will be a 3-year program. During the first year, these individuals will attend a university to study epidemiology, biostatistics, and related subjects. During the subsequent two years, they will work with senior epidemiologists in participating USPHS agencies (Alcohol, Drug Abuse, and Mental Health Administration; Food and Drug Administration; National Center for Health Statistics; and the National Institutes of Health) primarily in research studies. Applicants who have already had a year of study in epidemiology and biostatistics will in some cases be accepted only for the final two years of the program. A matching procedure will be employed to assure that each individual is assigned to a preceptor whose area of expertise is of interest to the trainee, and consistent with his/her career plans. Salaries will be provided according to the scale in effect for staff fellows in intramural research at ADAMHA and NIH. First year salaries are currently \$30,000 for physicians, \$24,000 for non-physicians. Educational costs and (allowable) relocation expenses for the first year are provided. The number of positions offered will depend upon the availability of resources.

Basic requirements for application to the program are:

1. M.D., doctorate in an allied health profession, or Ph.D. in a biomedical or behavioral science, or equivalent, and one year of post-doctoral training or experience (by July 1, 1988).
2. U.S. citizenship at time of application.
3. Acceptability to an accredited university offering an M.P.H. or equivalent, or more advanced public health degree (for the first year of this program).

To obtain further program details and application forms, send a postcard only, with your printed name and home mailing address to:

PHS Epidemiology Training Office
Attention: Ms. E. Patterson
9000 Rockville Pike
NIH, Building 1, Room 215
Bethesda, Maryland 20892

Please . . . do not send letters, curriculum vitae, resumes, transcripts, reprints, etc. until you have reviewed the instructions for submission and completed the application form.

(The USPHS is an equal opportunity employer)

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to study the molecular biology of phosphoinositol-sphingolipid synthesis and function in yeast. Gene cloning experience essential. Send résumé and three references to: **Drs. Robert Lester or Robert Dickson, Department of Biochemistry, University of Kentucky Medical Center, Lexington, KY 40536-0084. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION—Available 15 August 1987. Cell biology research on extracellular matrix and membrane proteins. Part-time teaching in anatomy labs. Excellent research facilities and ample research time. Starting salary is \$20,800. Send curriculum vitae and names of three references by 25 July 1987, to: **Gary E. Wise, Ph.D., Chairman, Department of Anatomy, Texas College of Osteopathic Medicine, Camp Bowie at Montgomery, Fort Worth, TX 76107-2690. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION—NEUROBIOLOGY—available immediately to study the role of motor cortex in the acquisition and performance of skilled movement. Areas of research include representation patterns in primate motor cortex, nerve injury and experience-induced change in motor cortex organization, role of modulatory systems in modifying the functional organization of cortex, computer simulations. Experience in electrophysiological techniques, computer programming, and interest in neocortical function preferred. Send curriculum vitae with names of three references to: **John P. Donoghue, Ph.D., Center for Neural Science, Box 1953, Brown University, Providence, RI 02912; Telephone: 401-863-2701.**

POSTDOCTORAL/PHOTOSYNTHESIS available 1 September 1987 for studies of water oxidation, reaction centers, and properties of membrane surfaces. Approaches include structural, biochemical, biophysical, and molecular biological. The position is for 1 year with the possibility of extension. Salary is highly competitive. Send curriculum vitae, short statement of research interests, and names of three references, with telephone numbers, to: **Dr. Michael Seibert, Solar Energy Research Institute, 1617 Cole Boulevard, Golden, CO 80401. SERI is an Equal Opportunity Employer.**

POSTDOCTORAL POSITION IN PLANETARY ATMOSPHERES LUNAR AND PLANETARY LABORATORY UNIVERSITY OF ARIZONA

Applications are invited for a postdoctoral research position at the Lunar and Planetary Laboratory, University of Arizona, in Tucson, Arizona. The position will involve research in experimental as well as theoretical physics, mostly involving planetary physics and analysis of UV data from the Voyager mission. Research opportunities include the bound and extended atmospheres and ionospheres of the giant planets and their interstellar medium. Applications should have a strong background in theory and data analysis. Physicists and astronomers are encouraged to apply. Send curriculum vitae, bibliography and three letters of reference to: **Dr. A. L. Broadfoot, Lunar Planetary Laboratory, University of Arizona, 901 Gould-Simpson Building, Tucson, AZ 85721. Application deadline: 1 August 1987. The University of Arizona is an Equal Opportunity/Affirmative Action Title IX, Section 504 Employer.**

POSTDOCTORAL POSITION IN PLANT MICROBIOLOGY: To study *Agrobacterium* T-DNA metabolism leading to insertion of bacterial DNA into plant genomes. Strong research environment. Duties include directing molecular genetics laboratory course with experienced assistants. Ideal training for academic job. Funded 3 years. Begin January 1988 or sooner. Salary \$18,000 plus 23% fringes. Send résumé and three references to: **Dr. Walt Ream, Department of Biology, Indiana University, Bloomington, IN 47405; call 812-335-2549.**

POSTDOCTORAL POSITIONS. Molecular analyses of cellular development through conditional blocks, cyclic nucleotide receptors, a natural pheromone (SH-containing cyclic ribotide), protein phosphorylation, phospholipid metabolism, or regulations of de novo cell wall biogenesis.

Send curriculum vitae and names of references to: **Dr. David R. Sonneborn, Zoology Research Building, University of Wisconsin-Madison, 1117 West Johnson Street, Madison, WI 53706.**

An Equal Opportunity Employer.

Sungene

Sungene Technologies Corporation
is expanding

Sungene Technologies Corporation, an established plant biotechnology company in the San Francisco Bay Area, is expanding its staff of Scientists to conduct research in the areas of:

Molecular Biology with an emphasis on the application of **Restriction Fragment Length Polymorphism** studies to corn breeding.

We are seeking Scientists at the Ph.D., M.S. and B.S. levels who possess experience in **RFLP** research.

Sungene Technologies offers an excellent salary, benefits, relocation and stock option plans. Please send resume with references to:

**John Kelley
Sungene Technologies
Corporation
3330 Hillview Avenue
Palo Alto, CA 94304**

TENURED POSITION

REPRODUCTIVE BIOLOGIST TO DIRECT GAMETE BIOLOGY RESEARCH PROGRAM

Established Ph.D. basic scientist to direct research program in academic environment and new IVF-ET program. Experience in tissue culture and sterile technique mandatory. Previous IVF-ET experience preferable. Salary negotiable. For more information send C.V. to:

**Sandra Ann Carson, M.D.
Department of Obstetrics and Gynecology
University of Tennessee, Memphis
University Physicians Foundation, Inc.
956 Court Avenue, Room D-324
Memphis, TN 38163**

Affirmative Action/Equal Opportunity Employer

RESEARCH SCIENTIST PHARMACOLOGY

Amgen is a growing, dynamic organization producing innovative products for human health care through recombinant DNA technology. Our development of erythropoietin, GCSF, and other significant products has placed us firmly on the leading edge of the biotechnology industry. Continued advancements in research have created an immediate opportunity for a Research Scientist in Pharmacology.

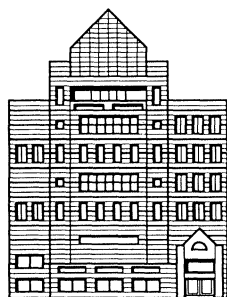
Qualified applicants will possess a Ph.D. in Pharmacology or a related discipline with a strong background in whole animal research and experience in one or more of the following areas: inflammation, wound repair, immunopharmacology, hematology and oncology. Proficiency in statistical analysis of data is essential and Postdoctoral training is highly desirable.

Amgen offers a competitive compensation and benefits package as well as a challenging and stimulating research environment. Our location in the scenic Conejo Valley (about an hour northwest of Los Angeles) offers the best in Southern California living. Qualified applicants should direct a resume and a list of 3 references, in confidence, to:

**Recruitment, Dept. #30
AMGEN
1900 Oak Terrace Lane
Thousand Oaks
CA 91320**

Equal Opportunity Employer





***Director of the Vollum
Institute for Advanced
Biomedical Research***

THE OREGON
HEALTH SCIENCES UNIVERSITY

The Oregon Health Sciences University, the state's only academic health center, seeks a director for the Vollum Institute for Advanced Biomedical Research. The institute is a major division of the university and is committed to the application of molecular biology to research in the neurosciences. The institute occupies a new 67,000-square-foot building and is supported by a substantial private endowment. Its work interrelates with a wide range of molecular- and neuroscience-oriented university research and graduate programs.

Preference will be given to an active investigator of international stature with a record of accomplishment in molecular neurobiology, including such fields as biochemistry, immunology, virology or developmental biology as they relate to the nervous system. The director may have an M.D. or Ph.D. degree and should have a leadership role in an academic, government or industrial research program. In addition to developing new unit(s) within the institute, for which approximately 10 scientific positions are now open, the director will assume responsibility for a core of established neuroscientists who were recruited by Dr. Edward Herbert, the first director, before his untimely death. The director must be motivated to encourage the career growth of peer and junior staff within the organization as well as being concerned with his or her personal scientific development.

The Oregon Health Sciences University is an affirmative action employer. The deadline for submission of resumes is Sept. 15, 1987, or until the position is filled.

Send applications and nominations to:

John A. Resko, Ph.D.
Chairman, Search Committee for
Director of the Vollum Institute
The Oregon Health Sciences University, L474
3181 S.W. Sam Jackson Park Road
Portland, Oregon 97201



**NATIONAL INSTITUTES
OF HEALTH (NIH)
NATIONAL CANCER
INSTITUTE (NCI)**

Biologists; Chemists (Medicinal/Organic, Natural Products, Synthetic/Analytical); Mass Spectroscopists; Microbiologists; Virologists; Pharmacologists. The NCI's Developmental Therapeutics Program (DTP) has several positions available for senior level scientists, laboratory investigators, and postdoctoral fellows to participate in various scientific projects for discovery and development of potential anti-AIDS agents. These positions are located in various intramural laboratories and extramural branches of the Program and involve bench research of administrative scientific duties relative to contract research. Salary will be commensurate with education, experience and level of work required.

Interested applicants for these positions should submit their Curriculum Vitae, bibliography and salary history to: J. Crooke, Personnel Management Branch, NCI, NIH, 9000 Rockville Pike, Bldg. 31, Room 3A16, Bethesda, MD 20892, by July 31, 1987.

An Equal Opportunity Employer

POSITIONS OPEN

POSTDOCTORAL POSITIONS in molecular microbiology for research on the mechanism of barbiturate-mediated induction of P-450 cytochromes in bacteria and on the structure-activity relationships of these monooxygenases [see L.-P. Wen, and A. J. Fulco, *J. Biol. Chem.* 262, 6676-6682 (1987); L. O. Narhi and A. J. Fulco, *ibid.*, pp. 6683-6690]. Experience in the standard techniques of molecular biology and biochemistry including molecular cloning, DNA sequencing, site-specific mutagenesis and protein purification is desirable. Recent Ph.D. recipient preferred. Send curriculum vitae and names and addresses of three references to: **Dr. Armand Fulco, Department of Biological Chemistry, UCLA School of Medicine, Los Angeles, CA 90024-1737.**

POSTDOCTORAL POSITIONS available immediately and later for the study of the biochemistry and cell biology of actin-myosin and microtubule-kinesin motile systems in non-muscle cells. Appointment would be as a Staff Fellow or Senior Staff Fellow (United States citizen), initially for 2 years and renewable annually for a maximum of 5 years. The starting salary will be \$20,000 or higher, depending on experience. Candidates interested in protein structure-function, cell biochemistry, or cell biology should contact: **Dr. Edward D. Korn, Laboratory of Cell Biology, National Heart, Lung, and Blood Institute, National Institutes of Health, 9000 Rockville Pike, Building 3, Room B1-22, Bethesda, MD 20892.**

An Equal Opportunity Employer.

TWO POSTDOCTORAL POSITIONS will become available on or about 1 October 1987 for individuals with a recent Ph.D. interested in participating in a program concerned with the relationship between sterol/lipid biosynthesis and function in crop plants.

Please submit curriculum vitae and three letters of support to:

**W. David Nes, Research Chemist
Plant and Fungal Lipid Group
Plant Physiology Research Unit
USDA, Agricultural Research Services
P.O. Box 5677
Athens, GA 30613
Telephone 404-546-3275**

ARS is an Equal Employment Opportunity

TWO POSTDOCTORAL POSITIONS AVAILABLE immediately in biological electron microscopy and image analysis laboratory to help in development and use of methods for 3D localization of cellular components using immunocytochemistry, 400-kV EM, and 3D computer graphic reconstruction. Experience in at least one of these areas is desirable. One to 4 years; salary depends on experience. Send curriculum vitae and names of three references to: **Dr. Lee Peachey, Department of Biology, University of Pennsylvania, Philadelphia, PA 19104.**

POSTDOCTORAL/RESEARCH ASSOCIATE to investigate neurochemical mechanisms of polychlorinated biphenyl and dibenzofuran toxicity in both in vivo and in vitro preparations. Grant-supported position through Health Research, Inc. at Wadsworth Laboratories. This position may also entail teaching at SUNY Graduate School of Public Health. Knowledge of catecholamine biochemistry and HPLC analysis of biogenic amines is desirable. Salary commensurate with experience. *An Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae and names of three references to: **Health Research, Incorporated, c/o Dr. Richard Seegal, Wadsworth Laboratories, Albany, NY 12201.**

POSTDOCTORAL RESEARCH ASSOCIATE position available to study the structure, function, development, and plasticity of the neuromuscular junction, with emphasis on the active zone and the extracellular matrix. Techniques used include intracellular recording, freeze-fracture, electron microscopy and immunocytochemistry. Background in neurobiology or cell biology needed. Please send curriculum vitae and names of two references to: **Dr. C.-P. Ko, Department of Biological Sciences, University of California, Los Angeles, CA 90089-0371.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE. Position available immediately to study molecular aspects of intergeneric bacterial coaggregation. Studies employing biochemical and genetic approaches will focus on a recently isolated cell surface receptor protein. Candidates should have a recent Ph.D. in microbiology or biochemistry with experience in molecular biology and protein chemistry. Send curriculum vitae and three letters of reference to: **Dr. Joseph DiRienzo, Department of Microbiology, University of Pennsylvania School of Dental Medicine, 4001 Spruce Street, Philadelphia, PA 19104. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE. MICROBIOLOGIST [GS-11/12 (\$27,172 to \$32,567)] opening available 1 October 1987, second year negotiable, with the U.S. Department of Agriculture, Agricultural Research Service, Veterinary Toxicology and Entomology Research Lab, College Station, Texas, located on a 60-acre modern facility adjacent to the College of Veterinary Medicine, Texas A&M University. The assignment is part of a new high priority research program, salmonellosis in beef cattle. In conjunction with a team of veterinarians, microbiologists, pathologists, and biochemists, the primary focus of the incumbent's research will be to determine the immunological parameters in cattle allowing persistence of *Salmonella* "carriers." Projects will include development of assays for *Salmonella* detection and a cocktail type *Salmonella* vaccine, and the potential application of various biological response modifiers to aid in clearance of *Salmonella* from the animal. U.S. citizenship is required. Ph.D. obtained in the last 3 years is desired. For information, contact: **Dr. J. R. DeLoach, 409-260-9484.** For application procedures, contact: **Sheila Conner, 301-344-1508.** Applications should be marked S-7-012 and sent to: **Personnel Operations Branch, Southern Section, Building 417, BARC-East, Beltsville, MD 20705.**

An Equal Opportunity Employer

Columbia University Orthopaedic Research Laboratory—**NEW POSTDOCTORAL RESEARCH SCIENTIST—Ph.D., BIOCHEMIST IN CONNECTIVE TISSUE RESEARCH.** This is a 3-year position for research in the biochemistry of cartilage and intervertebral disc. Candidates should be knowledgeable in protein-carbohydrate biochemistry, immunochemistry and/or molecular biology. Experience in connective tissue research is desirable. Interdisciplinary collaborative research is expected. Competitive salary range of \$26,000 to \$32,000 per annum depending on experience; 1 October 1987 starting date is anticipated. Interested candidates should send their curricula vitae to: **Anthony Ratcliffe, Ph.D., Orthopaedic Research Laboratory, Columbia-Presbyterian Medical Center, 630 West 168th Street, BB 1412, New York, NY 10032.**

PRE- AND POSTDOCTORAL POSITIONS: DEVELOPMENTAL BIOLOGY/TERATOLOGY. Pre- and postdoctoral positions funded by an NIH training grant are available for mechanistic studies in developmental biology and teratology. Areas of study offered by an interdisciplinary group of faculty include: genetics and environmental factors in dysmorphogenesis; receptors, agonists, signaling molecules, and membrane lipid metabolism in normal and abnormal embryogenesis; retinoids in development and differentiation; cellular and molecular biology of neurogenesis, extracellular matrices, and developmental immunology; neurochemistry, brain function, and behavior; prenatal diagnosis and cytogenetics of birth defects; cell- and organism-based screening systems in toxicology and hazard-assessment.

B.S. or advanced degree in some area of the life sciences required. Send curriculum vitae, statement of research interests, and the names of three references (include thesis director, if applicable) to: **Chairman, Pre- or Postdoctoral Admissions Committee for Teratology Training Grant, Daniel Baugh Institute, Jefferson Medical College of Thomas Jefferson University, 1020 Locust Street, Philadelphia, PA 19107.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE—Position available for an electrophysiologist to characterize the properties of central axons which have regenerated along peripheral nerve implants. Preference given to applicants experienced in spinal cord physiology and/or tract-tracing, and histological techniques. Please send curriculum vitae with names of three references to: **Dr. Julia K. Terzis, Microsurgical Research Center, Eastern Virginia Medical School, 700 Olney Road, Norfolk, VA 23507.**

PROFESSOR OF MEDICINE—The Harvard Medical School is searching for a Professor of Medicine and Director of the Laboratory of Clinical Pharmacology at the Dana-Farber Cancer Institute. Candidates should have demonstrated accomplishment in the field of clinical pharmacology as it applies to experimental cancer research. Candidates should send curriculum vitae, a statement of research and clinical interests, and the names of three evaluators to: **Ms. Karin E. Wetmore, Office of the Dean for Academic Affairs, Harvard Medical School, 25 Shattuck Street, Boston, MA 02155.** *Harvard University is committed to increasing representation of women and minority members among its faculty and particularly encourages applications from such candidates.*

**HOWARD FLOREY INSTITUTE OF
EXPERIMENTAL PHYSIOLOGY
AND MEDICINE
UNIVERSITY OF MELBOURNE,
PARKVILLE, 3052, AUSTRALIA.
PROTEIN CHEMIST**

Applications are invited for a postdoctoral/research officer position in the field of protein microsequencing and protein/peptide isolation. The successful applicant will be expected to develop high sensitivity (less than 10 pmol) protein sequencing methods using the Applied Biosystems 470A Sequencer. Experience with HPLC isolation of proteins and peptides would also be an advantage.

The Howard Florey Institute is a leading medical research Institute in Australia, and conducts research on the chemistry, molecular biology, and physiology of hormones. The successful applicant would join a team involved with peptide synthesis, protein sequencing, DNA synthesis and molecular biology of peptide and protein hormones.

QUALIFICATIONS: A Ph.D. in biochemistry, chemistry, or related areas. **SALARY:** \$A24,533.

Send curriculum vitae, reprints and two letters of reference to: **Dr. Ross Fernley, Howard Florey Institute, University of Melbourne, Parkville Victoria 3052, Australia.**

PSYCHOLOGY OR PHYSIOLOGY faculty research position for Ph.D. available in the Behavioral Medicine Laboratory at Lafayette Clinic, Wayne State University School of Medicine, Department of Psychiatry. No teaching responsibilities. Salary and rank commensurate with qualifications. Salary highly competitive with excellent benefits. Send curriculum vitae, publications, and three letters of reference to: **Robert Freedman, Ph.D., Director, Behavioral Medicine, Lafayette Clinic, 951 East Lafayette, Detroit, MI 48207.**

REGIONAL ENVIRONMENTAL ADVISOR

The U.S. Agency for International Development is seeking a Caribbean regional environmental advisor on a 2-year personal services contract. The position will be based in Barbados with up to 60% travel to other Caribbean countries. Duties include advising A.I.D. Missions on environmental impact assessments and natural resource management issues related to development activities. Minimum qualifications include: (i) an advanced degree in an environmental discipline; (ii) 3 years of relevant experience in areas such as environmental impact assessment, environmental planning, natural resource economics, marine resources management, etc.; (iii) fluency in either Spanish or French; (iv) U.S. citizenship. Developing country experience and fluency in both Spanish and French are highly desirable. Send résumé or SF-171 as soon as possible to: **James S. Hester, Chief Environmental Officer, LAC/DR, Room 2239 NS, Agency for International Development, Washington, DC 20523. Equal Opportunity Employer.**

Postdoctoral Fellow SK&F-Investigative Toxicology

The Department of Investigative Toxicology at Smith Kline & French Laboratories is seeking a Postdoctoral Scientist to investigate basic mechanisms of renal toxicity. The specific areas of research will include: relationship of drug metabolism to renal toxicity, mechanisms mediating cell specific toxicity within the nephron and the influence of aging on susceptibility to drug-induced renal toxicity. The successful candidate will be expected to publish work in leading scientific journals, present research at local and national meetings and interact and collaborate with other members of the department.

The selected individual will have:

- Ph.D. in Pharmacology/Toxicology, Biochemistry, Physiology or related field.
- a growing publication record.
- demonstrated experience in the area(s) of interest.

Our postdoctoral appointments are of 1 year duration and with mutual agreement, renewable for a second year. We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your C.V. and names of 3 references to: Ms. Mary Ann McCarry, Administrator, Relocation & Employment Services, C0028, Smith Kline & French Laboratories, Research & Development, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V

SK&F
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BIOCHEMIST (ANALYTICAL / PHYSICAL)

BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc., is a major researcher, developer, manufacturer, and marketer of pharmaceuticals. We are currently seeking an experienced Scientist for our Research and Development Center, located in DANBURY, CT.

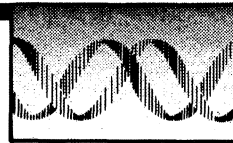
This position requires a BS / MS in biological, analytical, or physical chemistry with a minimum of 2 years of laboratory research experience in physical chemical characterization of proteins. A working knowledge of major electrophoretic techniques and / or optical spectroscopic techniques applicable to protein quantification and structure analysis is essential. Pharmaceutical experience is highly desirable.

Our challenging and dynamic environment is combined with a highly competitive compensation / benefits package including relocation assistance.

Please send your resume to Dept. JC-IJ, R&D, BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc., 90 East Ridge, P.O. Box 368, Ridgefield, CT 06877. An equal opportunity employer m/f/h/v.



**Boehringer
Ingelheim**



Molecular Immunology/ Cell Biology

Genentech, Inc. is a research and development company which utilizes recombinant DNA technology to produce pharmaceutical products for the treatment of a variety of human diseases. We have the following positions available in the areas of Molecular Immunology and Cell Biology.

Postdoctoral Fellow

In our Molecular Immunology/Cell Biology Laboratory investigations are directed toward an understanding of cellular interactions in chronic inflammation and tissue remodeling. We seek individuals to investigate the regulation of matrix synthesis and destruction by cytokines and to study T lymphocyte — monocyte interactions and the control of cytokine synthesis and secretion.

The successful candidates will possess a Ph.D. in cell biology, immunology or molecular biology and have experience in tissue culture techniques. Please send resume in confidence to: Edward Amento, M.D., Head Rheumatology Research, Genentech, Inc.

Research Associate

Successful candidates will be involved in studies involving cellular interactions in chronic inflammation and tissue remodeling. Candidates should have a BS or MS in cell biology, immunology or molecular biology and extensive tissue culture experience. For this position please direct your resume to: Sherrie Wilkins, Human Resources, Dept. #OSWEA, Genentech, Inc., 460 Point San Bruno Boulevard, South San Francisco, CA 94080.

Genentech, Inc. offers an excellent salary and benefits package coupled with the opportunity to make a significant contribution to our organization. An equal opportunity employer.

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POSITIONS OPEN

RESEARCH ASSISTANT OR RESEARCH ASSOCIATE to join project on iron metabolism in developing red blood cells. Specific areas include analysis of receptor properties and kinetics, cellular iron transport, and heme synthesis. Techniques currently in use include chromatography, electrophoresis, and cell culture with new projects being developed in molecular biology of iron transport, delivery, and storage. Applicant should be willing to work with radioisotopes and though laboratory or prior work experience is preferred, it is not essential. Position can be a satisfying and productive experience for applicant who enjoys a stimulating research effort. Salary open, depending upon prior experience and qualifications. Good fringe benefits and environment. Interested candidates should submit a résumé including references to: **The Department of Anatomy, University of Connecticut Health Center, Farmington, CT 06032. An Affirmative Action/Equal Opportunity Employer M/W/H.**

RESEARCH ASSOCIATES: The Behavioral Sciences Department of the Armed Forces Radiobiology Research Institute (AFRRI), a command of the Defense Nuclear Agency, is seeking two behavioral scientists to conduct animal research on the behavioral effects of ionizing radiation. One position is for an experimental psychologist with interests in the areas of learning and operant conditioning. The successful candidate will work as part of a team studying the force and duration of motor responses. This position, available immediately, is a 1-year appointment renewable up to 4 years. Salary ranges from \$22,458 to \$35,326. The other position is for a Research Pharmacologist with interests in CNS neurochemistry and behavior. Although consideration would be given to candidates with experience in any area of neurochemistry, emphasis would be placed on those with a strong background in ion channels. This is a 4-year appointment with salary ranges from \$32,567 to \$42,341. For both positions, desirable qualifications include a Ph.D., a strong publication record, and independent research experience. To apply for these Civil Service positions, send a form SF-171 and/or curriculum vitae and reprints of published work to: **Armed Forces Radiobiology Research Institute, Civilian Personnel Office, Bethesda, MD 20814-5145**, not later than 31 August 1987. Reference Announcement Number 28/86B for the research psychologist position, and MSVA 29/87A for the research pharmacologist position. Direct inquiries to: **Dr. Alan Harris, Department Chairman, telephone 202-295-0114** or **Deborah Bush, Personnel Management Specialist, telephone 202-295-1426. U.S. citizenship is required. AFRRI is an Equal Opportunity Employer.**

RESEARCH ASSOCIATE POSITION available immediately to work on a project involving the development of monoclonal antibodies to lymphocyte differentiation antigens. The candidate should have experience and knowledge of murine or human monoclonal antibody technology. Research skills of particular interest include cDNA cloning and expression, and protein biochemistry. Send résumé, outline of research experience, reprints, list of references, and date when available, to: **Dr. Nicole Suciu-Foca, Director of Immunogenetics, College of Physicians and Surgeons, Columbia University, 630 West 168th Street, New York, NY 10032. Columbia University is an Equal Opportunity Employer.**

RESEARCH ASSOCIATE for university in north-east Ohio to conduct advanced research in polymer chemistry with special emphasis on carbocationic polymerization, and synthesis and characterization of networks, i.e., synthesis of telechelic polyisobutylenes for the preparation of perfect networks. No experience required. Must have Ph.D. in chemistry with specialization in polymer chemistry and 2 years of research at doctoral level in polymer synthesis by carbocationic polymerization using Dry Box technique and polymer characterization. Forty hours per week, \$16,000 per year. Qualified applicants reply immediately with résumé to: **R. Lechler, JO# 1100485, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

RESEARCH ASSOCIATE to work on computer analysis, simulation and modeling of physical processes involved in gastric motility. Experience with numerical methods, modeling/simulation, statistics, and signal processing preferred. Send curriculum vitae to: **Dr. A. Dubois, Room A3075, c/o Civilian Personnel, USUHS, Bethesda, MD 20814. An Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

RESEARCH ASSOCIATE

Positions are available in the area of designing better enzymes for synthetic applications. Applicants with experience in rDNA/site-directed mutagenesis/protein chemistry are sought. Annual salary: \$26,000 to \$30,000. Contact: **Dr. C.-H. Wong, Department of Chemistry, Texas A&M University, College Station, TX 77843. Telephone: 409-845-4242.**

Beecham Laboratories, a leading manufacturer of veterinary biologicals, has **TWO RESEARCH AND DEVELOPMENT POSITIONS** available: (i) A **VETERINARY VIROLOGIST**, with industrial experience, to conduct research toward the USDA licensing of vaccines; (ii) **PROTEIN CHEMIST** (M.S. or Ph.D.), with a bacteriology and/or virology background to assist in immunogen identification and purification. To apply send résumé to: **Hans Draayer, Manager Biological Research and Development, Beecham Laboratories, East Lincoln Road, White Hall, IL 62092. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH DEVELOPMENT PROFESSIONALS University of Illinois at Chicago

Applications are invited for three entry level or intermediate research development positions. Duties include identifying funding opportunities, assisting the development of faculty projects and proposals, assisting development of large-scale interdisciplinary or multi-investigator projects, and providing assistance in research administration. Program Coordinator for Social and Behavioral Sciences, Program Coordinator for Clinical Sciences, and Program Coordinator for International Programs.

Doctorate in a relevant discipline preferred, but master's degree acceptable if other experience is strong. Requires excellent communication skills and ability to work in a service role in an academic environment. Starting date: 15 September 1987 preferred. Salary negotiable. For full consideration, applications should be received by 1 August 1987. Send letter describing qualifications and specifying position sought, résumé, and three references to: **Kimberly Pollard, Office of Vice Chancellor for Research (m/c 672), University of Illinois at Chicago, Box 6998, Chicago, IL 60680. Telephone: 312-996-4995.**

The University of Illinois at Chicago is an Affirmative Action, Equal Opportunity Employer

RESEARCH POSITION: Cellular Immunology and Molecular Biology. The Pulmonary Unit (Medical Services) of the Massachusetts General Hospital has a staff opening for a Ph.D. with a strong background and experience in cellular immunology and molecular biology to work in newly expanded laboratory facilities. Experience in the use of in vitro techniques, including cell culture work, and interest in environmental/occupational immunology are desirable. Please send curriculum vitae and a brief description of research interests to: **L. C. Ginns, M.D., Pulmonary Unit, Bulfinch 1, Massachusetts General Hospital, Boston, MA 02114. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH SCIENTIST: to work on projects requiring experience in: (i) recombinant DNA techniques including DNA sequencing, cloning, and expression of genes in bacterial hosts, gene transfections into mammalian cells, RNA and DNA blot procedures; (ii) growth and maintenance of mammalian tissue culture cell lines; (iii) RNA and DNA isolations; (iv) basic experience with DNA-protein interactions and their investigation by gel shift assays and DNA footprinting; (v) raising and isolation of polyclonal antibodies in rabbits or goats; (vi) protein purifications. Position requires a Ph.D. in biochemistry, at least 3 years of postdoctoral experience in the area of molecular biology, and published papers in refereed journals. Salary range \$25,000 to \$32,000. Please submit résumé to: **Mr. Kenneth Hewitt, Room E19-230, Personnel Office, Massachusetts Institute of Technology, Cambridge, MA 02139. MIT is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

RETROVIROLOGIST—RESEARCH SCIENTIST

The Regional Primate Research Center (RPRC) at the University of Washington seeks a virologist with Ph.D. and experience in retrovirology to join an active, expanding group studying simian retroviruses, SAIDS-D Washington (a type D retrovirus), and SIV (Simian Immunodeficiency Virus), a lentivirus closely related to human AIDS viruses (HIV). We seek an individual interested in the pathogenesis of AIDS-like diseases in nonhuman primates as animal models for HIV infection in man. Should have, or be prepared to develop, skills in virus isolation, cultivation, quantitation, and characterization; experience in molecular biology desirable but not required. Collaborative efforts with HIV research groups at the University of Washington and other institutions in the Seattle area have been instituted. Ongoing studies include testing of anti-viral drugs and recombinant vaccines against HIV and the Simian AIDS viruses. Future efforts will focus on gene expression of the simian retroviruses. Starting salary: \$26,148 to \$30,336.

Submit curriculum vitae and three references by 24 July 1987 to: **Dr. Michael G. Katze, Core Staff Scientist, Regional Primate Research Center SJ-50, University of Washington, Seattle, WA 98195. Telephone: 206-543-8837.**

Affirmative Action/Equal Opportunity Employer.

SENIOR MICROBIOLOGIST

Ph.D. or M.S. scientist. Must have experience in chlamydia. Responsibilities to include large scale production of chlamydia and other microbiological culture, development of test device for quick detection of chlamydia and other infectious diseases, in addition to some supervising.

Pacific Biotech, Inc. is a leader in the biomedical field. Please send résumé and references with telephone numbers to: **Pacific Biotech, Inc., Personnel Department, 9050 Camino Santa Fe, San Diego, CA 92121.**

SENIOR SCIENCE ADVISORS—U.S. Environmental Protection Agency is seeking candidates for the position of Senior Science Advisor in Regional Offices. Primary duties include overseeing preparation and review of risk assessments for site-specific exposure situations and the interaction with senior regional managers on policy implication of such assessments. These activities will be managed through a small centralized staff providing services to various program operations.

The positions are interdisciplinary in nature. While a strong scientific background and capacity to assess quantitative risk assessment techniques is a necessity, practical experience in successfully operating in interface between science and regulatory policies is the critical qualification sought. Effective communication techniques are essential. Positions require proven ability to explain strengths and weaknesses of science issues to both managers and lay public. Additional qualifications include capacity to lead training programs for technical staff. Since effort will be operated as central staff function, ability to successfully interact with technical staffs is important.

Candidates will have graduate training in toxicology, public health, or related biological or scientific discipline. A Ph.D. would be highly desirable. Specific experience in conducting quantitative risk assessments of environmental exposure situations in a government regulatory climate would also be highly desirable. Potential opportunities exist in the following locations: New York, Chicago, and Washington, D.C. Interested candidates should send résumés to: **Victor J. Kimm, Deputy Assistant Administrator, Office of Pesticides and Toxic Substances (TS-788), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. The U.S. Environmental Protection Agency is an Equal Opportunity Employer. U.S. citizenship is required for positions in the competitive service.**

SENIOR SOFTWARE ENGINEER—5 years of experience with VAX/VMS/C. Demonstrated system design responsibility. Young dynamic company developing new NMR techniques in medicine and research. **E. Leboy, V.P. Engineering, Phospho-Energetics Inc., 3401 Market Street, Suite 300, Philadelphia, PA 19104.**

VICE PRESIDENT FOR ACADEMIC SERVICES

The University of Texas Health Science Center at San Antonio invites applications and nominations for the position of Vice President for Academic Services. The successful applicant will have primary responsibility for the organization and direction of academic support services at a dynamic health science center. These services include: student services, academic computing, library, instrumentation services, educational resources, animal resources, a teleconference network, and an office of international affairs. The Vice President for Academic Services reports directly to the President of the Health Science Center and is a member of the Health Science Center Executive Committee.

Applicants should have an earned doctorate in a health related science, have an outstanding record of academic accomplishment and have significant administrative managerial/leadership experience in academic settings. An academic appointment appropriate with the qualifications of the applicant is available.

The University of Texas Health Science Center is one of four health science centers in The University of Texas System and consists of a School of Allied Health, a Dental School, a Graduate School of Biomedical Sciences, a Medical School, and a Nursing School. The Health Science Center supports a faculty of nearly 800 with F.Y. '86 research awards of \$41.7 million and an operating budget in excess of \$140 million per annum.

Applications must include a current curriculum vitae and a list of five individuals who can be contacted for reference letters. The deadline for applications is July 17, 1987.

Applications should be addressed to:

Merle S. Olson, Ph.D.
Vice President for Academic Services Search Committee
Department of Biochemistry
The University of Texas Health Science Center at San Antonio
San Antonio, TX 78284-7760

The University of Texas System is an equal opportunity affirmative action employer.

Sandoz Ltd., a leading Swiss-based international company, specializing in pharmaceuticals, agrochemicals and dyestuffs, is offering a

POSTDOCTORAL FELLOWSHIP

for a period of up to two years at its research laboratories in Basle, Switzerland.

To a person with a recent Ph.D. (or equivalent level) in biochemistry or biological sciences, this challenging position offers the possibility of conducting original research. Our goal is the application of modern in-vivo NMR spectroscopic techniques to the study of metabolic processes.

For further information please write or phone.

Applications with CV should be sent to:

**Sandoz Ltd., Personnel Department,
Ref. 7806
Attention Mr. R. Zbinden
P.B., CH 4002 Basle**



Scientist

Genetic Systems Corporation/Oncogen, a division of Bristol-Myers and a leader in biotechnology, performs research dedicated to pursuing novel approaches to the development of diagnostic and therapeutic products in the areas of immunology, infectious diseases and cancer.

We are currently recruiting for a Ph.D. with post-doctoral experience for a position that will involve eukaryotic expression with emphasis on mammalian cell expression. Job responsibilities would require construction of expression vectors for the production of growth modulating molecules, transfer of the recombinant molecules into an appropriate cell host and selection of cell lines and cell clones synthesizing large amounts of the desired molecule.

Qualified candidates should possess experience in cDNA cloning, recombinant DNA manipulations, prokaryotic and eukaryotic cell culture, DNA transfections, immunological detection of recombinant products, and protein purification.

Genetic Systems Corporation offers a creative work environment, competitive salaries and an excellent benefit package. For consideration, please send your curriculum vitae to: **Personnel, Genetic Systems Corporation, 3005 First Avenue, Seattle, WA 98121. EOE/AA.**



Genetic Systems
CORPORATION



EniChem Americas Inc.

EniChem, part of ENI (Ente Nazionale Idrocarburi), is establishing a Plant Biotechnology Group of approximately 50 scientists in the Princeton, New Jersey area. The group intends to apply an integrated approach to the improvement of crops for U.S. and international markets.

We are interested in Ph.D., M.S. or B.S. level candidates who can apply technical expertise in Molecular Biology, Metabolic Biochemistry or Cell Biology to the project areas of nitrogen assimilation/utilization or crop protection. We have immediate openings for candidates who have experience with monocot protoplasts, transformation technology and/or the expression of genes in plants.

Send Curriculum Vitae and cover letter to:

**Director of Personnel
ENICHEM AMERICAS INC.
1221 Avenue of the Americas
New York, N.Y. 10020**

An Equal Opportunity Employer

POSITIONS OPEN

SENIOR SCIENTISTS

Lockheed Engineering and Management Services Company is seeking senior scientists with a M.S. degree and a minimum of 6 years of directly related experience preferably in limnology or aquatic chemistry. Lockheed is currently supporting the United States Environmental Protection Agency in the National Acid Precipitation Assessment Program. Lockheed is responsible for quality assurance relating to chemical, soils, and biological measurements for extensive long-term and episodes monitoring.

Lockheed requires technical expertise to develop quality assurance plans, reports, and analytical and sampling methods. Large datasets will be assessed for accuracy, precision, and interlaboratory bias at a component and system level. Investigations of the datasets require a working knowledge of SAS programming. Statistics and presentation of results will be in the form of EPA reports, journal articles, and seminars. Applicants should have excellent verbal, written, and interpersonal communication skills. The position is available immediately and some travel is required.

Lockheed is an Equal Opportunity/Affirmative Action Plan Employer, M/F/H/V. Please submit credentials to:

Lockheed—EMSCO
1050 East Flamingo Road, Suite 209
Las Vegas, NV 89119
Attention: Ms. Julie D. Hunter

SENSORY NEUROPHYSIOLOGIST. Tenure-track possibility for position available at assistant professor level. Serious commitment to collaborative work within the Microsurgical Research Center. Expertise required to characterize electrophysiologically the properties of central axons which have regenerated along peripheral nerve implants. Preference given to applicants experienced in spinal cord neurophysiology and tract-tracing and histological techniques. Please send curriculum vitae with three letters of recommendation to: **Dr. Julia Terzis, Microsurgical Research Center, Eastern Virginia Medical School, P.O. Box 1980, Norfolk, VA 23501.**

SPRING WHEAT BREEDER/GENETICIST. Assistant/associate professor, tenure-track. Ph.D. plus 2 years of research experience, publication record, participation in grant-funded research required. Salary: Open, competitive. Support: \$160,000 per annum. Strong varietal development and basic wheat genetics program expected. Grantsmanship and graduate training expected. Screening of applications will begin on 15 August 1987. Send letter of application, professional curriculum vitae, transcripts, reprints, and names and addresses of four referees to: **Dr. Tom Blake, Spring Wheat Search Committee, Plant and Soil Science Department, Montana State University, Bozeman, MT 59717.** *MSU is an Equal Opportunity/Affirmative Action Employer.*

Columbia University Orthopaedic Research Laboratory—**NEW STAFF ASSOCIATE—BIOCHEMISTRY.** This is a position for research in the biochemistry of cartilage and intervertebral disc. Applicants should have significant experience in some of the following: RIA, ELISA, tissue culture, analytical and preparative biochemical techniques. The ability to work independently and knowledge of connective tissue an advantage. Applicants should have a master's or bachelor's degree and related experience, or the equivalent in education, training and experience. Competitive salary in the range of \$22,000 to \$30,000 per annum. 1 October 1987 starting date is anticipated. Interested candidates should send their résumés to: **Anthony Ratcliffe, Ph.D., Orthopaedic Research Laboratory, Columbia-Presbyterian Medical Center, 630 West 168th Street, BB 1412, New York, NY 10032.**

TENURE-TRACK HEALTH SERVICES RESEARCH POSITION: Applications are being accepted for an Assistant Professor of Preventive Medicine at the University of Wisconsin/Madison School of Medicine. Responsibilities include that of Health Services Research Coordinator at the Middleton Veterans Administration Hospital and teaching and research in the health administration programs of the University. A doctoral degree (Ph.D., M.D.) and strong methodological skills and research experience in a health services research discipline are required. Salary range begins at \$38,727. Send résumés by 30 August 1987 to: **David Kindig, M.D., 229 Bradley, 1300 University Avenue, Madison, WI 53706.** *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE NORTH CENTRAL FOREST EXPERIMENT STATION

SUPERVISORY RESEARCH FORESTER, St. Paul, Minnesota. The North Central Forest Experiment Station is seeking a Supervisory Research Forester to serve as Project Leader for the Forest Inventory and Analysis Research Work Unit. The incumbent will lead a team of researchers, support professionals, and technicians in the Unit's dual role of research and inventory. Responsible for selecting, analyzing, and assigning studies, advising scientists, and reviewing and approving study plans, reports, and manuscripts. Conducts personal research to comprehensively analyze emerging resource problems and issues. Requirements: Academic or professional experience in theoretical and applied forest mensuration; statistical sampling and design theory; principles of economic and resource analysis; and the relationship of industrial, economic, environmental and social factors to forest resources. A Ph.D. or equivalent education and experience are required. U.S. citizenship is required. Salary commensurate with experience. Information concerning the position may be obtained by telephone: **612-642-5303**; no collect calls. *The USDA is an Equal Opportunity/Affirmative Action Employer.*

TUMOR IMMUNOLOGIST DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY EASTERN VIRGINIA MEDICAL SCHOOL

Applications are invited for a tenure-track assistant professor position. Candidates must have Ph.D., 2 years of postdoctoral experience, and a plan for an independent research program in some area of tumor immunology. Special areas of interest are the study of growth factors, receptors and cell growth regulation and differentiation, anti-idiotypes, chimeric and heterobifunctional antibodies, biological response modifiers, and clinical application of monoclonal antibodies. The successful candidate will be encouraged to spend 70 percent or more of their time in research and collaborate with other basic and clinical faculty. Minimal but active participation in teaching medical and graduate students required. The department is undergoing a major growth phase with a focus on cancer research that includes excellent incentives. Eastern Virginia Medical School is located within the lovely harbor district of Norfolk, Virginia, and is only minutes away from the Chesapeake Bay and Atlantic Ocean. Send curriculum vitae, three letters of reference, and a brief description of your current and future research studies to: **George L. Wright, Jr., Ph.D., Professor and Chairman, Department of Microbiology and Immunology, Eastern Virginia Medical School, P.O. Box 1980, Norfolk, VA 23501.** *An Affirmative Action/Equal Opportunity Employer.*

The Division of Urology, UCLA School of Medicine, is recruiting a **UROLOGIST** to function as a full-time faculty member primarily in the areas of urodynamics and female urology. Applicants must be Board-certified or Board-eligible, have extensive experience and made sufficient contributions to clinical research in urodynamics, bladder reconstruction, and female urology. The applicant must be capable of organizing and supervising a section of neurourology and female urology in a large clinical department. Applicants should submit curriculum vitae, bibliography, and names of references. *UCLA is an Equal Opportunity/Affirmative Action Employer.* Inquiries should be addressed to: **Chief, Division of Urology, UCLA School of Medicine, Los Angeles, CA 90024-1738.**

TRAINEESHIP

Applications sought for 3-year NIH-funded **TRAINEESHIP** to begin 1 July 1988, in multidisciplinary research/studies on dental caries, leading to M.S. or Ph.D. Applicants must be U.S. citizens and hold dental, M.D. or Ph.D. degrees. Stipend range \$15,996 to \$30,000, depending on experience. *Equal Opportunity Employer; women and minority applicants encouraged.* Contact: **Dr. L. Messer, 18:214 Moos Tower, University of Minnesota School of Dentistry, Minneapolis, MN 55455.**

COURSE

A **PRACTICAL COURSE** in The Crystallization of Membrane Proteins. Lectures and demonstrations on behavior of membrane proteins, detergents, and techniques in crystallized membrane protein analysis: 5 to 10 October 1987 at Argonne National Laboratory, Argonne, Illinois. To apply, submit a letter describing interest and experience with membrane proteins and membrane protein crystallization and a short résumé by 15 August 1987 to: **R. M. Garavito, Department of Biochemistry and Molecular Biology, The University of Chicago, Chicago, IL 60637.**

FELLOWSHIPS

NIH POSTDOCTORAL FELLOWSHIP (M.D. OR Ph.D.) in the Division of Gastroenterology, Medical College of Virginia. Research involves radioligand binding and radioimmunoassay; isolated muscle cells and cultures; transduction mechanisms and intracellular messenger systems. Position available anytime between 30 June 1987 and 1 September 1987. Send curriculum vitae to: **Dr. J. R. Grider, Box 711, MCV Station, Medical College of Virginia, Richmond, VA 23298-0711; Telephone: 804-786-9601.**

POSTDOCTORAL FELLOWSHIP: Hematology Unit of the University of Rochester. Postdoctoral fellowship available to study second messengers in blood cell activation and proliferation. Membrane regulation of the ionic environment and interactions of phospholipid metabolism are relevant to these studies. Qualified person with Ph.D. and relevant background required. Send curriculum vitae and the names of three references to: **George B. Segel, M.D., University of Rochester Medical Center, Box 610, Rochester, NY 14642.**

POSTDOCTORAL FELLOWSHIP position available for a biochemist with interest and skills in protein chemistry and molecular biology for research on amyloid proteins. Research will include protein purification, peptide chemistry, sequence analysis, enzymology, monoclonal antibody production, and DNA technology. Send applications to: **Dr. Martha Skinner, Arthritis Center K5, 71 East Concord Street, Boston, MA 02118.**

POSTDOCTORAL FELLOWSHIP available 15 June 1987, to study mechanisms underlying functional and structural neuroplasticity during regeneration and aging. Send curriculum vitae, names and addresses of three references to: **G. Gilad, Department of Neurobiology, Coriell Institute for Medical Research, Copewood Street, Camden, NJ 08103.**

Department of Botany, University of Toronto (UT) (Erindale Campus) invites applications from Canadian citizens and permanent residents who wish to be sponsored for an **NSERC UNIVERSITY RESEARCH FELLOWSHIP (URF).** Applicants from the areas of molecular biology/biotechnology of plants, fungi, or bacteria are particularly encouraged. Position (available July 1988) would involve some teaching opportunities appropriate for specialization of appointee. NSERC URFs are awarded for 5 years. Salary at assistant professor level. Financial support for research included. Have three letters of reference sent, submit curriculum vitae and representative reprints by 15 September 1987 to: **Professor P. A. Horgen, Department of Botany, University of Toronto, Erindale Campus, Mississauga, Ontario, Canada, L5L 1C6.** *The University of Toronto encourages both women and men to apply for positions.*

MARKETPLACE

FOR SALE: Philips 300 Electron Microscope (with cold finger and 50 mm camera attachment), S/N D776, excellent condition. For additional information, please call **Dr. Larry F. Lemanski, Chairman, Department of Anatomy and Cell Biology, SUNY Health Science Center at Syracuse; tel. 315-473-5120.**

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POST DOCTORAL RESEARCH STAFF MEMBER

The Lawrence Livermore National Laboratory, located in the San Francisco Bay Area, is seeking five Postdoctoral Research Staff Members.

Two openings require recent PhD's in cell biology, hematology, immunology, molecular biology or related areas. Individuals will participate in a multidisciplinary effort to separate fetal cells from maternal blood using fluorescence activated cell sorting, determine the frequency of fetal cells in maternal blood and apply fluorescence in situ hybridization with chromosome-specific probes and image analysis to detect cytogenetic abnormalities.

Two openings require recent PhD's in molecular biology, biochemistry, or related areas. Experience in recombinant DNA techniques as applied to cloning mammalian DNA and use of cloned probes is useful. This staff member will join team efforts in the construction and characterization of human chromosome-specific DNA libraries involving mass cell culture, chromosome isolation, purification by flow sorting, and cloning the DNA into large insert phage and cosmid vectors or in physical mapping studies of the human genome. Optional parallel research will be driven by the individual's interests and current studies on the human genome within the Biomedical Sciences Division.

The fifth opening is for a candidate with a recent PhD in microbiology, having a background and strong interest in the molecular aspects of bacteria living in extreme environments. Individual will work on the isolation and characterization of recently discovered bacteria in geothermal fluids. Experience in anaerobic bacteriology, genetics, and/or recombinant DNA methodology is desirable.

We offer a highly competitive salary and benefits package. Send curriculum vitae: **Earl G. Morrell, Employment Division, Lawrence Livermore National Laboratory, P.O. Box 5510, Dept KSC73702B, Livermore, CA 94550.**



U.S. citizenship required.
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EXPERT, AIDS-ANTIVIRAL EVALUATIONS

**DEVELOPMENTAL THERAPEUTICS
PROGRAM (DTP)**

**NATIONAL CANCER INSTITUTE (NCI)
NATIONAL INSTITUTES OF HEALTH (NIH)**

The NCI is actively seeking an individual to manage a new initiative in preclinical AIDS-antiviral drug evaluations. In the NCI's Developmental Therapeutics Program's extramural component, a new organization is being created to provide a specific focus for development and operation of a national AIDS-antiviral drug screening program. Activities will encompass the development and application both of human host-cell based anti-HIV models and of specific biochemical/molecular target directed screens. Highly automated technologies will be adapted to achieve a testing capacity in excess of 10,000 substances per year. Sources of agents for evaluation and possible development include: the NIH intramural and extramural programs (grantees, contractors, drug discovery groups); other government agencies; private research institutes; foundations; individual investigators; universities, private industry, and through international collaborations.

The incumbent will manage these activities and coordinate these functions closely with those of the other DTP branches/laboratories as required. He/she will serve as chairperson or member of key committees encompassing the major executive decision making responsibilities for the AIDS preclinical drug development program.

Candidates should have a Ph.D. and/or M.D. with relevant training (Pharmacologist, Biologist, Microbiologist, Chemist, Medical Officer, etc.) with experience in antiviral drug research and development or closely related fields. Specific experience in retrovirology and development and applications of antiviral drug screening models and/or preclinical experimental therapeutic investigations would be desirable. Substantial experience in management of complex applied technology operations in a highly interdisciplinary setting would also be advantageous.

Proposed salary range (\$45,763-\$72,120) dependent upon education and experience. Interested individuals should submit their Curriculum Vitae, bibliography, salary history, and any other relevant materials to: Dr Michael R. Boyd, Associate Director, Developmental Therapeutics Program, Division of Cancer Treatment National Cancer Institute, Landow Building, Room 5A21, Bethesda, Maryland 20892, by July 31, 1987.

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Quick recovery: Better than 95% in minutes.

Most biochemical techniques for eluting separated samples from electrophoretic gels are frustrating.

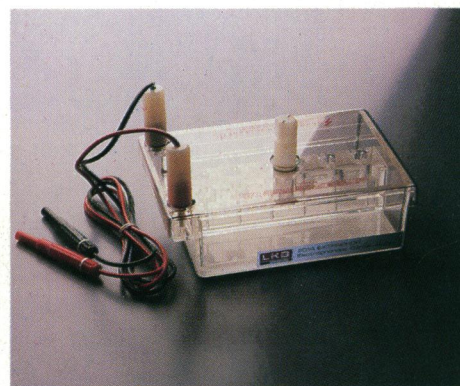
Either they're elaborate and time consuming or disappointingly low in yield.

Extraphor, the new electrophoretic concentrator from LKB, is the exception. Easy-to-use Extraphor lets you extract up to six samples simultaneously, and yields greater than 95% can be achieved.

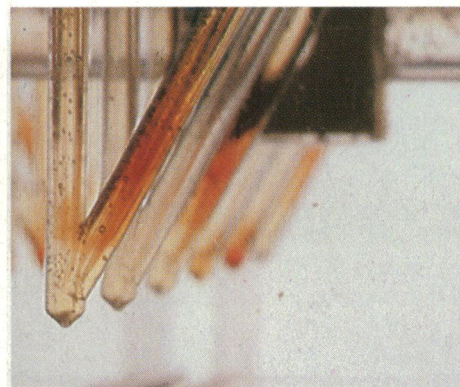
Set-up time is just 10 minutes, and waste is minimal. Extraphor uses a highly

conductive salt solution in a V-shaped channel to isolate and concentrate the nucleic acid or protein eluted from agarose or acrylamide gel slices. SDS proteins can be eluted by adding SDS to the high salt buffer.

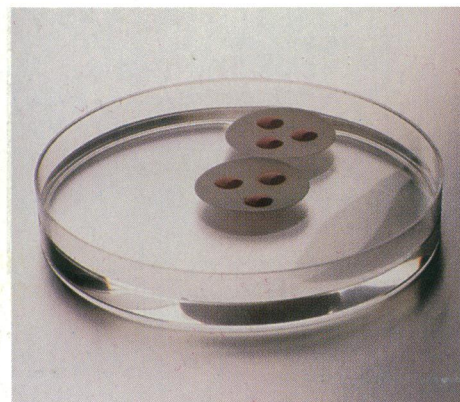
Electrophoretic extraction in a high-salt barrier is such an elegant and efficient method, you'll wonder why you never tried it before. To see how it's done, ask your nearest LKB dealer for an Extraphor data sheet today.



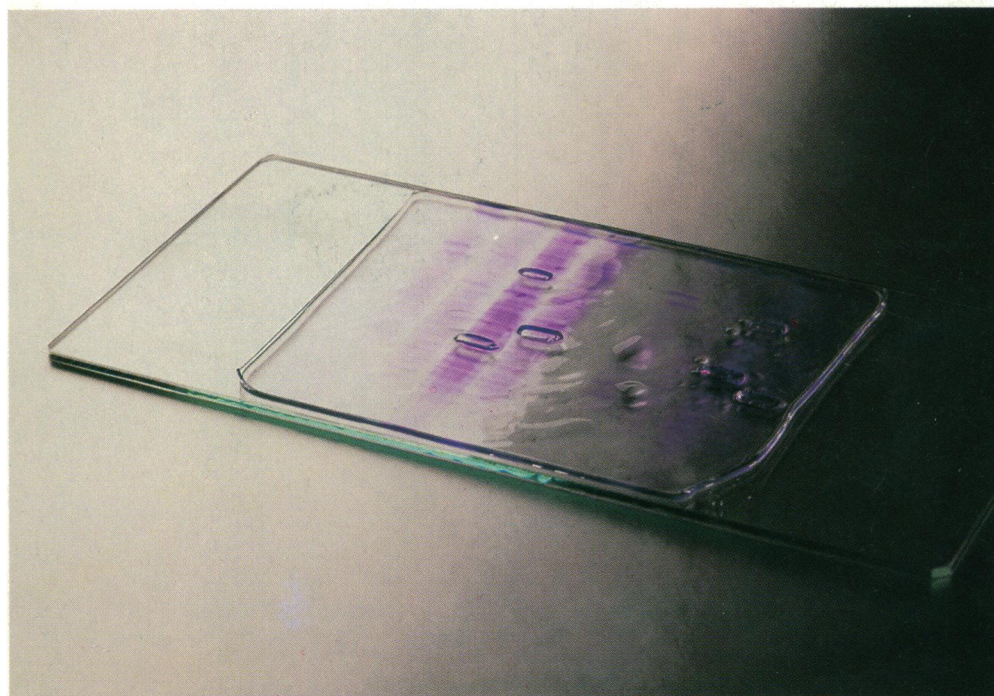
The LKB Extraphor unit.



Hemoglobin samples concentrating.



Salt concentration is quickly adjusted.



DNA or protein samples can be cut out of acrylamide or agarose gels.

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