

about 200 pages on ordination and scaling, 100 on clustering, 50 on fractals, 25 on path analysis, and then 60 on spatial analysis, by 5, 3, 1, 1, and 2 authors respectively.

In treating ordination and scaling, Gower and Carroll give masterly accounts of the techniques used at Rothamsted and Bell Laboratories, including principal components and principal coordinates, canonical and correspondence analyses, Procrustes analyses, the use of transformations, and several varieties of multidimensional scaling, including what are called internal and external analysis. Classical methods are two-way, by rows and columns; three-way analyses are also dealt with here, but not higher dimensions. A couple of unexciting ecological examples are used, but scarcely interpreted: "It . . . remains for ecologies to 'interpret' the . . . effects on the seaworm species"—and no doubt to say what a seaworm is and to distinguish "*interpret*" from *interpret*.

The other techniques are dealt with in the same vein. Bezdek deals with nonstandard clustering, especially using fuzzy sets, and Legendre and Lefkovich treat constrained and conditional clustering. These are all techniques that should be used more widely, and the scarcity of examples is disappointing. Fractals, I am sure, are important, but Frontier fails to mention most of the published accounts of their use in ecology and clearly failed to convince the ecologists of their relevance. Path analysis, spatial point patterns, and spatial autocorrelation are dealt with most competently by de Leeuw, by Ripley, and by Sokal and Thomson, respectively, though again their usefulness is left in doubt. Thus Ripley, "*None* of the transect methods detect visually obvious spatial patterns."

Some of the authors give excellent advice. Bezdek says try two or three different algorithms and think hard if the results disagree. Heiser, on joint ordination of rows and columns by unfolding, says, "Attacking very simple problems by very powerful tools is usually unwise" and notes that his techniques are most useful for large, relatively unstructured data sets in which there is not much information about mechanism.

The final 90 pages of the book give working group reports from microbial, benthic, and pelagic ecologists, from limnologists, and from plant and animal terrestrial ecologists. These tend to be even more individual than the techniques chapters, with many didactic but disputable statements: "Studies of vegetation . . . strictly confined to the species comprising the vegetation are outside the domain of ecology"; "This is not to say that there are no uses for PCA . . . in . . . ecology"; "The best technique is often the one best known to the

user. Ecologists should not dissipate their time and effort in mastering irrelevant techniques." This reluctance to try a variety of techniques, many of which may indeed be relevant, is discouraging. The weather must have been bad in Roscoff.

One good justification for these sour quotes, though, is that numerical ecology is defined as the analysis of data sets. Analytical and simulation models are excluded, and the interaction between data and hypothesis is scarcely considered. So the techniques discussed here cover only a limited part of quantitative ecology, but nevertheless they should be known to all practitioners. Only if they are used as part of exploratory and explanatory programs will the relative usefulness of different techniques become clear.

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Books Received

Acid Rain. The Relationship between Sources and Receptors. James C. White, Ed. Elsevier, New York, 1987. xvi, 223 pp., illus. \$59. From a conference, Washington, DC, Dec. 1986.

Acidic Precipitation. Formation and Impact on Terrestrial Ecosystems. C. J. Brandt, Ed. Verein Deutscher Ingenieure, Düsseldorf, F.R.G., 1987 (U.S. distributor, C. J. Brandt, 622 NW Linden Ave., Corvallis, OR 97330). x, 281 pp., illus. \$35. Translated from the German edition (Düsseldorf, 1983).

Autoimmunity and Autoimmune Disease. David Evered and Julie Whelan, Eds. Wiley-Interscience, New York, 1987. x, 278 pp., illus. \$49.95. Ciba Foundation Symposium, 129. From a symposium, London, U.K., Sept.-Oct. 1986.

Biosensors. Fundamentals and Applications. Anthony P. F. Turner, Isao Karube, and George S. Wilson, Eds. Oxford University Press, New York, 1987. xvi, 770 pp., illus. \$120.

Biosensors International Workshop 1987. (Braunschweig, F.R.G., June 1987.) R. D. Schmid, Ed. VCH, New York, 1987. xx, 346 pp., illus. Paper, \$75. GBF Monographs, vol. 10.

Biotechnology. Vol. 7a, Enzyme Technology. John F. Kennedy, Ed. VCH, New York, 1987. xii, 761 pp., illus. \$198.

A Bird Watcher's Handbook. Field Ornithology for Backyard Naturalists. Laura O'Biso Socha. Dodd, Mead, New York, 1987. x, 182 pp., illus. \$16.95; paper, \$7.95.

Carcinogenic and Mutagenic Responses to Aromatic Amines and Nitroarenes. Charles M. King, Louis J. Romano, and Dennis Schuetzle, Eds. Elsevier, New York, 1987. xii, 424 pp., illus. \$95. From a conference, Dearborn, MI, April 1987.

Causal Inference. Kenneth J. Rothman, Ed. Epidemiology Resources, Chestnut Hill, MA, 1988. viii, 207 pp. Paper, \$24. Based on a symposium, June 1985.

Cell Volume Control. Fundamental and Comparative Aspects in Animal Cells. R. Gilles, L. Bolis, and Arnost Kleinzeller, Eds. Academic Press, Orlando, FL, 1987. xii, 289 pp., illus. \$75. Current Topics in Membranes and Transport, vol. 30.

Detection and Data Analysis in Size Exclusion Chromatography. Theodore Provder, Ed. American Chemical Society, Washington, DC, 1987. x, 307 pp., illus. \$69.95. ACS Symposium Series, 352. Based on a symposium, New York, April 1986.

Development of Folate and Folic Acid Antagonists in Cancer Chemotherapy. National Cancer Institute, Washington, DC, 1987 (available as Stock No. 017-042-00215-0 from Government Printing Office, Washington, DC). viii, 241 pp., illus. Paper, \$12. NCI Monographs, no. 5. From a symposium, Tarpon Springs, FL, Jan. 1986.

Experimental Techniques in Low-Temperature Physics. Guy K. White. 3rd ed. Clarendon (Oxford University Press), New York, 1987. xii, 331 pp., illus. Paper \$29.95. Monographs on the Physics and Chemistry of Materials.

First Light. The Search for the Edge of the Universe. Richard Preston. Atlantic Monthly Press, New York, 1987. 263 pp. \$18.95. A Morgan Entekin Book.

Food, Health and the Consumer. T. R. Gormley, G. Downey, and D. O'Beirne. Elsevier Applied Science, Barking, U.K., 1987 (U.S. distributor, Elsevier, New York). xviii, 317 pp. \$61.25.

Forecasts and Environmental Decisionmaking. The Content and Predictive Accuracy of Environmental Impact Statements. Paul J. Culhane, H. Paul Friesma, and Janice A. Beecher. Westview, Boulder, CO, 1987. x, 306 pp., illus. Paper, \$28. Social Impact Assessment Series.

Fossil Conchostraca of the Southern Hemisphere and Continental Drift. Paleontology, Biostratigraphy, and Dispersal. Paul Tasch. Geological Society of America, Boulder, CO, 1987. xiv, 290 pp., illus. \$55. Geological Society of America Memoir no. 165.

From Paradox to Reality. Our New Concepts of the Physical World. Fritz Rohrlich. Cambridge University Press, New York, 1987. x, 227 pp., illus. \$34.50.

From Social Class to Social Stress. New Developments in Psychiatric Epidemiology. Matthias C. Angermeyer, Ed. Springer-Verlag, New York, 1987. xii, 314 pp., illus. \$77.60. From a symposium, Hamburg, F.R.G., Nov. 1985.

Frontiers of High Energy Physics. I. G. Halliday, Ed. Hilger, Bristol, U.K., 1987 (U.S. distributor, Taylor and Francis, Philadelphia). x, 232 pp., illus. \$48. From an institute, London, Aug.-Sept. 1986.

General Relativity and Gravitation. M. A. H. MacCallum, Ed. Cambridge University Press, New York, 1987. xviii, 407 pp., illus. \$49.50. From a conference, Stockholm, July 1986.

Genetic Aspects of Plant Mineral Nutrition. W. H. Gabelman and B. C. Loughman, Eds. Nijhoff, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). x, 629 pp., illus. \$172. Developments in Plant and Soil Sciences, vol. 27. From a symposium, Madison, WI, June 1985.

Interfaces Under Laser Irradiation. L. D. Laude, D. Bäuerle, and M. Wautelet, Eds. Nijhoff, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). iv, 443 pp., illus. \$105. NATO Advanced Science Institutes Series E, vol. 134. From an institute, Acquafredda di Maratea, Italy, July 1986.

The Interpretation of Psychological Tests. Joel Allison, Sidney J. Blatt, and Carl N. Zimet, Hemisphere (Harper and Row), New York, 1988. x, 342 pp. \$25. Reprint, 1968 ed.

Introduction to Hazardous Waste Incineration. Louis Theodore and Joseph Reynolds. Wiley-Interscience, New York, 1987. xiv, 463 pp., illus. \$49.95.

Introduction to Modern Statistical Mechanics. David Chandler. Oxford University Press, New York, 1987. xiv, 274 pp., illus. \$42.50; paper, \$24.95.

Introduction to the Analysis of Metric Spaces. J. R. Giles. Cambridge University Press, New York, 1987. xiv, 257 pp., illus. \$49.50; paper, \$16.95. Australian Mathematical Society Lecture Series, vol. 3.

Low Temperature Detectors for Neutrinos and Dark Matter. K. Pretzl, N. Schmitz, and L. Stodolsky, Eds. Springer-Verlag, New York, 1987. x, 159 pp., illus. \$39. From a workshop, Tegernsee, F.R.G., May 1987.

Lymphocytes. A Practical Approach. G. G. B. Klaus, Ed. IRL, McLean, VA, 1987. xxii, 261 pp., illus. Paper, \$32. Practical Approach Series.

Manufacturing Intelligence. Paul Kenneth Wright and David Alan Bourne. Addison-Wesley, Reading, MA, 1988. xvi, 352 pp., illus. \$37.95.

Margins of Reality. The Role of Consciousness in the Physical World. Robert G. Jahn and Brenda J. Dunne. Harcourt Brace Jovanovich, New York, 1987. xiv, 415 pp., illus. \$27.95.

Medicine and Society in Wakefield and Huddersfield, 1780-1870. Hilary Marland. Cambridge University Press, New York, 1987. xxiv, 503 pp., illus. Cambridge History of Medicine.

Membrane Filtration. The Technology of Pressure-Driven Crossflow Processes. R. G. Gutman, Hilger, Bristol, U.K., 1987 (U.S. distributor, Taylor and Francis, Philadelphia). \$77.

Simulation of Liquids and Solids. Molecular Dynamics and Monte Carlo Methods in Statistical Mechanics. Giovanni Cicotti, Daan Frenkel, and Ian R. McDonald, Eds. North-Holland, Amsterdam, 1987 (U.S. distributor, Elsevier, New York). xii, 481 pp., illus. Paper, \$58.75. North-Holland Personal Library.

Products & Materials

Microbiological Growth Analyzer

The Bioscreen C is a microbiological growth analyzer. The user may choose an incubation temperature between 15° and 55°C. The analyzer is available with software for antimicrobial testing, bioassays, toxicity testing, and genotoxicity testing. The data-handling system can derive the final experimental result, such as the quantification of an antibiotic or vitamin, or it can merely collect data on bacterial growth. Bioscreen C is suitable for growing molds, yeasts, and aerobic and anaerobic bacteria. LabSystems Oy (Finland). Circle 461.

Software for Braun-Blanquet Technique

COENOS is a software program for ordering and classifying vegetation in Braun-Blanquet tables. It extracts those species groups from the table that best differentiate groups of vegetation stands (relevés). Vegetation samples and the species that characterize them are automatically grouped to form distinctive blocks in the vegetation table. The blocks are ordered to follow the main environmental gradient. The full table, which can be as large as 520 columns by 450 rows, is displayed on the screen and may be further sorted by hand. COENOS operates on IBM PC, IBM PS/2, and compatible computers with at least 256 kilobytes of random-access memory and MS DOS 2.0 or later. \$85. Ceska & Roemer. Circle 462.

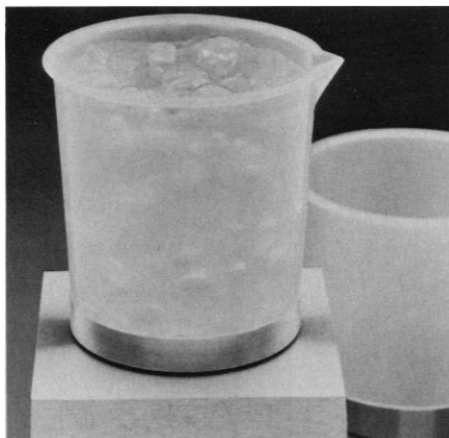
UV-VIS Detector for SFC

The model 501 ultraviolet-visible light (UV-VIS) detector operates under the high pressures and small volumes of capillary and packed microbore supercritical fluid chromatography (SFC). This continuously tunable detector has a 50-nl flow cell designed specifically for SFC and works with pressures as high as 408 atm. The 501 has a wavelength range of 190 to 800 nm and a

bandwidth of 6 nm. Other features include wavelength ratioing, a programmable dedicated microprocessor, four data outputs, and baseline compensation. Lee Scientific. Circle 463.

Heatable Plastic Beaker

The Nalgene Type HP is a plastic beaker that can be heated directly on a hot plate to a temperature of 288°C. It is made from Teflon PFA and has a PFA-coated graphite base. It is less expensive than a crucible of



precious metal and will not crack or shatter like glass. The beaker can be transferred directly from a hot plate to an ice bath. The Nalgene Type HP beaker is available with capacities of 100, 250, 400, 600, and 1000 ml. Nalge, a subsidiary of Sybron. Circle 466.

Chemical Structure Database

PSIDOM 5.1 is a chemical structure database program that can search 10,000 structures in less than a minute. The program contains seven modules. The PsiGen module allows the user to create, display, edit, and store chemical structure diagrams. As many as 20,000 structures may be defined and stored within a single database. The user enters the PsiBase module to search PsiGen files and annotate the structure diagrams. The PsiConv module converts PsiGen files into files that can be loaded into other programs or into ASCII files. The other modules allow the user to access a diagram from outside PSIDOM 5.1, to scale and output diagrams for integration with word processing files, to create chemical reaction diagrams and load them into ORAC, and to join, compress, or subdivide files. PSIDOM operates on IBM PC, PS/2, and compatible computers. Hampden Data Services (United Kingdom). Circle 467.

Antibodies

Rat monoclonal antibodies to mouse immunoglobulin G1 (IgG1), IgG2a, IgG2b, IgG3, κ light chain, and IgM. Zymed Laboratories. Circle 468.

Rat monoclonal immunoglobulin G1 to mouse γ interferon. Lee BioMolecular. Circle 469.

Mouse monoclonal antibody to bromodeoxyuridine. Janssen Biochimica (Belgium). Circle 470.

Rabbit antibody to cyclic guanosine 5'-monophosphate (GMP). Cymbus Bioscience (United Kingdom). Circle 471.

Monoclonal antibody to MAM-6. MeDiCa. Circle 472.

Monoclonal antibodies to eosinophil cationic proteins. MeDiCa. Circle 473.

Literature

1988 Designer Genes is a catalog of genes for interleukins 1 through 6, tumor necrosis factor, interferon γ , and growth factors. British Bio-technology (United Kingdom). Circle 452.

Controls is a catalog of coagulation controls, control sera, and substrate reagents and kits. Accurate Chemical & Scientific. Circle 477.

The *Sartoblot II* brochure describes an electrotransfer unit for semidry electrophoretic transfer. Sartorius Filters. Circle 478.

Basics for Biochemistry is a catalog of salts, buffers, buffer components, precipitation and denaturation reagents, chelators, antioxidants, and amino acids. Fluka Chemie AG (Switzerland). Circle 479.

The *Centricon Microconcentrators* brochure describes a microconcentrator with a molecular weight cutoff of 3000 that is designed for oligonucleotides, peptides, small proteins, and growth factor. Amicon Division, W. R. Grace. Circle 480.

The *1988-1989 Catalog* features products for electrophoresis, including a pulse controller for reverse field electrophoresis, a direct blotting sequencer, a programmable power supply, and an electroporation unit. Hoefer Scientific Instruments. Circle 481.

1988-1989 General Products Catalog features an automated electrophoresis system for proteins and enzymes, as well as supplies and instruments for immunology, hemostasis, and chromatography. Helena Laboratories. Circle 482.

1988-1989 Catalog is a catalog of 109 restriction endonucleases, as well as methylases, ligases, kinases, polymerases, nucleases, molecular weight standards, phage DNA, cloning vectors, primers, and linkers. New England BioLabs. Circle 483.

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.

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ASSISTANT PROFESSOR—INSECT PEST MANAGEMENT/VEGETABLES. (Extension/research). Tenure-track. Duties include extension (60%)—demonstration and implementation of insect pest management programs. Research (30%)—management of major insect pests of vegetables. Teaching (10%)—seminar course in insect pest management. Full position description available. Qualifications include Ph.D. in entomology or related discipline with training in insect pest management. Forward: (i) letter describing qualifications and interest, (ii) curriculum vitae, (iii) list of publications (include reprints), (iv) transcripts (post-secondary education), (v) names and addresses of three references to: **R. A. Morse, Chair, Department of Entomology, Cornell University, Comstock Hall, Ithaca, NY 14853-0999.** Application deadline is 1 August 1988. *Cornell is an Equal Opportunity/Affirmative Action Employer.*

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The successful applicant will be required to critically review and analyze published and unpublished pesticide data for their scientific validity and usefulness in meeting regulatory data requirements for pesticide registration. They will also prepare written reports based on their analysis. Strong writing skills and chemistry background are absolutely essential. Knowledge of pesticide and pesticide regulation/registration is especially helpful. Dynamac Corporation offers competitive salaries and a fully paid employee benefits package. To apply, please send résumé in confidence to:

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Attention: Personnel Department

ASSISTANT DIRECTOR

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ASSISTANT PROFESSOR OF BIOLOGY. Beginning salary range: \$23,000 to \$27,000. Position description: A full-time tenure-track position starting fall quarter 1988. Primary responsibilities include teaching of general zoology and preprofessional courses, including comparative anatomy, physiology, and genetics. Qualifications: Ph.D. and strong commitments to teaching required. Deadline for applying: 27 May 1988. Application materials: To be considered, applicants must submit a letter of application, transcripts, and three letters of recommendation. Apply to:

Chairperson
Biology Search Committee
Ohio University Belmont
45425 National Road
St. Clairsville, OH 43950

Ohio University Belmont is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

UNIVERSITY OF CALIFORNIA, IRVINE NEUTRINO PHYSICS GROUP ASSISTANT RESEARCH PHYSICIST

The Department of Physics, University of California, Irvine, is looking for an assistant research physicist to work on a program of neutrino physics at the Los Alamos Meson Physics Facility (LAMPF). This program includes continued efforts for a neutrino scattering experiment (E225) and a Large Cerenkov Detector (LCD) experiment. The successful candidate will be in charge of the data analysis on the neutrino physics for E225, work on the Monte Carlo simulation and the on-line data acquisition and analysis system for LCD. The work with the LCD data acquisition requires experience with the ACP System. A Ph.D. with extensive experience in beam stop physics, data acquisition and analysis, water Cerenkov and muon detectors, and a good knowledge of weak interaction and nuclear physics is required. Send résumé and bibliography to: **Dr. Richard Allen, Department of Physics, University of California, Irvine, CA 92717.** *The University of California is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR, MOLECULAR PARASITOLOGY. Tenure-track position available. Applicants must have at least 2 years of postdoctoral experience in molecular biology/parasitology, preferably with hemoflagellates. Applicants must display evidence of research productivity and the potential to develop an independent research program. Letters of application together with curriculum vitae and the names of three references should be sent to: **Dr. Philip A. D'Alessandro, Division of Tropical Medicine, School of Public Health, Columbia University, 630 West 168th Street, New York, NY 10032.** *Equal Opportunity Employer M/F.*

The University of Hawaii seeks applicants for a tenure-track, 11-month position in nutritional sciences at the **ASSISTANT PROFESSOR/RESEARCHER** level. Minimum qualifications are a Ph.D. in biochemistry or nutritional biochemistry. Postdoctoral and teaching experience, background in molecular biology or biotechnology desirable. Responsibilities include 60% research and 40% teaching, including a graduate level laboratory course. Annual salary range: \$29,676 to \$43,932. Starting 1 January 1989. Closing date: 15 June 1988. Submit letter of application, curriculum vitae, original transcripts of academic graduate and undergraduate work, and three letters of reference to: **N. E. Johnson, Department of Food Science and Human Nutrition, University of Hawaii-Manoa, 1800 East-West Road, Honolulu, HI 96822.** *Affirmative Action Equal Opportunity Employer.*

University of Health Sciences/The Chicago Medical School. The Department of Physiology and Biophysics invites applications for tenure-track positions at the rank of **ASSISTANT OR ASSOCIATE PROFESSOR.** Candidates must have a Ph.D. or M.D. degree, with sound training and research experience. The successful candidate will be expected to develop and maintain a strong independent research program and to participate in teaching medical and graduate students. Some emphasis will be placed on research in neuro-, cellular-, molecular- or membrane physiology, but other areas will be considered as well. Start-up funds are available. Salary will be commensurate with qualifications and a negotiable starting date. Recruitment will continue until suitable candidates are identified. Please send a description of research interests, curriculum vitae, and the names of three references to:

Richard Hawkins, Ph.D.
Professor and Chairman
Department of Physiology and Biophysics
University of Health Sciences/
The Chicago Medical School
3333 Green Bay Road
North Chicago, IL 60064

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ASSISTANT/ASSOCIATE PROFESSOR GEOPHYSICAL FLUID DYNAMICS

The Graduate School of Oceanography at The University of Rhode Island invites applications for a tenure-track teaching position in geophysical fluid dynamics at the assistant/associate professor level. The successful applicant is expected to pursue an active research program in theoretical, numerical, and/or laboratory studies of oceanic processes. Qualifications should include a Ph.D. in geophysical fluid dynamics or related field, postdoctoral experience and a demonstrated record of strong independent research, and a strong interest in teaching and advising graduate students.

Our department is actively involved in diagnostic and prognostic studies of western boundary currents, eddy transport processes in energetic and quiet ocean regions, equatorial oceans and atmosphere-ocean exchange. Opportunities exist for interaction with groups active in atmospheric transport processes and paleoclimate studies. Starting date is 1 September 1988 or soon thereafter.

Level of appointment will be commensurate with experience. Interested applicants should send a copy of their curriculum vitae, the names of four references, and a summary of research interests by 15 June 1988, or until filled, to: **Professor H. Thomas Rossby, Chairman, Search Committee, Assistant/Associate Professor, Geophysical Fluid Dynamics, The University of Rhode Island, Post Office Box G, Kingston, RI 02881.** *An Affirmative Action/Equal Opportunity Employer.*

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ASSISTANT OR ASSOCIATE PROFESSOR OF MEDICINE to assume major scientific responsibility for a cardiovascular molecular biology program. The candidate may be an M.D. or Ph.D. with interest and experience in molecular genetics of contractile proteins, membrane channels or membrane receptors. The candidate would be expected to establish own laboratory and interact closely with active ongoing laboratories working in biochemistry, cell physiology, and cell biology of the cardiovascular system within a research-oriented Section of Cardiology. Please send inquiries, résumé, and the names of three references to: **Morton F. Arnsdorf, M.D., Chief, Section of Cardiology, University of Chicago Hospitals, Box #423, 5841 South Maryland, Chicago, IL 60637.**

BIOCHEMISTRY/MOLECULAR BIOLOGY FACULTY POSITION. The Chemistry Department at Brigham Young University (BYU) invites applications for a full-time biochemistry faculty position. Applicants must have a Ph.D. in biochemistry or molecular biology. A background in chemistry and a proven record of productivity would be advantageous. The successful candidate must establish a competitive, funded research program and teach at the undergraduate and graduate levels. Application deadline is 31 May 1988.

Applicants should send curriculum vitae, a brief description of present and proposed research, and the names of several references to: **Dr. Donald Robertson, Chairman, Search Committee, 659 WIDB, Brigham Young University, Provo, UT 84602.** *BYU is an Equal Opportunity Employer.*

BIOLOGICAL AND MEDICAL RESEARCH SCIENTIST IMMUNOLOGY/HEMATOPOIESIS

Becton Dickinson Immunocytometry Systems, a leader in the development of instruments and reagents for cellular analysis, has an opening for a research scientist to head the development of a large-scale cell selection system with both research and therapeutic applications.

Duties primarily entail coordinating with polymer chemists, immunochemists, bioengineers, biologists and hematologists to integrate their expertise to be able to solve technical problems involved in obtaining large numbers of purified functional cells. Will directly supervise a laboratory team of biologists conducting pilot laboratory trials. Must be able to develop appropriate tests to assure quality and safety in preparation for clinical evaluation.

Candidate must possess a Ph.D. or M.D. degree, and at least 2 years of postdoctoral experience with demonstrated research ability in biotechnology, immunology and/or hematopoiesis. A working knowledge of immunochemistry and protein immobilization as well as experience with mammalian cell purification is desirable. Must have at least 2 years of project management experience in the field.

Salary Range: \$47,000 to \$55,000 (depending on experience)

Response must be postmarked no later than 13 June 1988 to be considered. Interested candidates should send curriculum vitae, representative publications, a statement of research interests and management experience and the names of three references to: **Becton Dickinson Immunocytometry Systems, Human Resources Manager, P.O. Box 7375, Mountain View, CA 94039.** *An Equal Opportunity Employer.*

CLINICAL CYTOGENETICIST

Tenure-track position available in the Department of Cellular and Structural Biology for a clinical cytogeneticist to develop independent research activities and to act as associate director of the Clinical Cytogenetics Laboratory. Applicants should submit curriculum vitae and three references to:

Charleen M. Moore, Ph.D.
Director, Clinical Cytogenetics Laboratory
Department of Cellular and Structural Biology
University of Texas Health Science Center
at San Antonio
7703 Floyd Curl Drive
San Antonio, TX 78284

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

POSITIONS OPEN

BIOCHEMIST/NMR/ELECTRON TRANSFER. Postdoctoral positions are available to study heme protein molecular redox complexes. Come to a productive research group situated in the scenic mountain southwest. Ph.D.'s in biochemistry and/or those with experience in modern NMR spectroscopy apply to: **Professor James Satterlee, Chemistry Department, University of New Mexico, Albuquerque, NM 87131.** Salary range: \$17,000 to \$19,000. *University of New Mexico is an Equal Employment Opportunity/Affirmative Action Employer.*

BIOCHEMISTRY RESEARCH SPECIALIST—\$18,000 per year: Immediate opening for biochemistry M.S. with background in protein chemistry/molecular biology. Will be involved in protein purification, assay and characterization, and the molecular cloning of the enzymes involved in the metabolism of the protein ubiquitin. Must be efficient with FPLC, HPLC, Phast-system, densitometer and DNA sequencing. Forty-hour work week.

Interested applicants apply in person or by résumé to: **The Georgia Department of Labor, 2811 Lakewood Avenue, SW, Atlanta, GA 30315, or the nearest Job Service Center, reference control number GA 5283648.** *Equal Opportunity Employer.*

BIOLOGICAL OCEANOGRAPHY SCRIPPS INSTITUTION OF OCEANOGRAPHY

Applications are invited for **ASSISTANT, ASSOCIATE, OR FULL PROFESSORIAL POSITIONS** (tenure-track/tenured); rank, level and salary commensurate with qualifications and experience, based on University of California pay scale. We are especially interested in interdisciplinary oceanographer-biologists who have had training and experience as oceanographers; those who can teach a kind of oceanography that emphasizes the measurement of the processes and events in the ocean itself as a means to understanding oceanic biology. Preference will be given to candidates whose research emphasizes aspects of the interaction between population biology, seawater chemistry and the physics of water motion. Research topics which emphasize multiple scale interactions and can be generalized to gyre or global scale issues are sought. Candidates will be expected to conduct an active research program supported by extramural funds and to be involved in graduate teaching and the supervision of graduate students. Applicants must hold a Ph.D. degree, or be advanced to candidacy, in an appropriate field, and have demonstrated excellence and independence in research. Assistant level candidates will be expected to show evidence of their potential through a publication record appropriate for their experience and letters of recommendation; associate or full professorial-level candidates must show evidence of a strong research record. Send letter of application including description of research interests, list of publications, résumé of teaching experience and names of at least five references to: **Chairman-B, Graduate Department A-008, Scripps Institution of Oceanography, University of California, San Diego, La Jolla, CA 92093.** Closing date for applications is 1 July 1988. *An Equal Opportunity/Affirmative Action Employer.*

CYTOGENETICIST

Winship Cancer Center of the Emory University School of Medicine seeks applicants for the position of cytogeneticist. The position is that of an assistant professor, tenure-track, who has extensive experience in the area of human and animal cytogenetics. The individual also must be experienced in the use of transgenics and the technical manipulation of gene injection and expression in mouse embryos. The incumbent will be expected to undertake a program of research in the area of fundamental molecular genetics and to provide interaction and support for scientists who require the transgenics technology for molecular biological research. In addition, the incumbent will be expected to perform a modest number of cytogenetics procedures for the human cytogenetics testing program of the Department of Pathology of Emory University School of Medicine. All applicants please send their curriculum vitae and three names of individuals who could be contacted for references to: **Dr. Kenneth W. Sell, Director, Winship Cancer Center, Emory University School of Medicine, Atlanta, GA 30322.** *Emory University School of Medicine is an Equal Opportunity Employer.*

BIOTECHNOLOGY SCIENTISTS

ICI, a world leader in the international agricultural industry, is continuing to expand its research capabilities in plant biotechnology in the U.S. This expansion is taking place principally through the Garst Seed Company, a major hybrid corn breeder, producer and marketer which forms part of the ICI Seeds Business. Our research headquarters are located near Ames, Iowa where laboratories are nearing completion in a new \$10 million facility.

The following challenging positions are immediately available. All offer the opportunity to work as part of an international, interdisciplinary research team committed to applying biotechnology to crop improvement.

Tissue Culture:	Ph.D. and B.S./M.S. applicants ideally with practical experience in corn cell biology.
Molecular Screening:	Ph.D. and B.S./M.S. applicants with theoretical and practical experience in the application of RFLP technology.
Quantitative Genetics:	Ph.D. applicants with mathematical and statistical skills and vision in the application of the biosciences to the study of polygenic traits.
Entomology:	B.S./M.S. applicants with familiarity in handling major corn pests in laboratory and field experimentation.

We offer competitive salaries and benefits together with significant prospects for long term career development.



Member of ICI Seeds

Apply to: Sue Schulz,
Garst Seed Company,
P.O. Box 500,
Slater, IA 50244.
Reference #BS1.
Deadline 5/31/88

Garst/ICI Seeds is an EOE

Staff Fellowship Opportunities in Biomedical Research DHHS/PHS/Food and Drug Administration Center for Biologics Evaluation and Research

The Food and Drug Administration, Center for Biologics Evaluation and Research, is searching for outstanding candidates with Medical or Doctor of Philosophy/Science Degrees to participate in our Staff Fellowship Program. This program offers initial two-year fellowships in biomedical research. Fellowships are located in various laboratories within the Center which is responsible for regulating biological products such as vaccines and blood derivatives as well as protecting the Nation's blood supply. Our laboratories are strategically located on the campus of the National Institutes of Health in Bethesda, Maryland, and offer outstanding facilities along with a stimulating and challenging work environment. Current research includes investigations in the areas of viral and bacterial diseases and vaccines, mechanisms of pathogenesis, cytokines, transplantation genetics, allergy and immunology, cell biology, and monoclonal antibodies. We have active research on AIDS and related diseases.

Salary range for candidates with a Doctor of Philosophy/Science Degree is from \$20,000 to \$42,600. Salary range for candidates with a Medical Degree is from \$24,000 to \$49,266. Salary, research support, and level of responsibility are commensurate with education and experience. Applicants must be either U.S. citizens or resident aliens eligible for citizenship within four years.

Interested candidates should send a current curriculum vitae and bibliography to FDA/Center for Biologics Evaluation and Research, Bldg. 29/Room 114.B, 8800 Rockville Pike, Bethesda, Maryland 20892. For further information, call Ms. Boyer or Ms. Hutchison on (301) 496-5394. Deadline for submission is August 15, 1988.

Food and Drug Administration
An Equal Opportunity Employer



Count on making a noticeable contribution MANAGER ENVIRONMENTAL TOXICOLOGY

Hoechst-Roussel Agri-Vet Company, a subsidiary of Hoechst Celanese Corporation, a Fortune 100 pharmaceutical/chemical company, has a position for a qualified Environmental Toxicologist.

The successful candidate will join our New Products Coordination Group to manage environmental field studies in the U.S.

Responsibilities will include:

- Preparing protocols, locating study sites and recommending contractors for environmental field studies.
- Providing interpretation of scientific and statistical data and practical conclusions resulting from field studies.
- Interacting with EPA, university, registration and contractors personnel to provide scientific expertise in ecological/environmental matters.
- Developing computer environmental fate modeling and providing input, interpretation and modifications of existing programs to aid in estimations of pesti-

cide exposure and to provide information for the design of field studies.

- Maintaining current awareness of rapidly changing EPA protocols and positions on issues regarding pesticide exposure including run-off, groundwater contamination, etc.

Requirements include a PhD or equivalent with 3-5 years experience in performing aquatic, avian, drift and other field studies and will involve 30% travel.

This position, located at our modern corporate complex in a pleasant suburban setting, provides an excellent salary with comprehensive, full paid benefits package.

Send resume with salary history and requirements, to: James Hamilton, Human Resources Department, Section 50, Hoechst Celanese Corporation, Route 202-206 North, Somerville, New Jersey 08876.

An affirmative action employer M/F/H.

Hoechst Celanese

Hoechst

POSITIONS OPEN

ERINDALE CAMPUS UNIVERSITY OF TORONTO DEPARTMENT OF BOTANY NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL OF CANADA (NSERC) UNIVERSITY RESEARCH FELLOWSHIP

The Department of Botany, University of Toronto, Erindale College, invites applications for an NSERC University Research Fellowship tenable from 1 July 1989. The Department will sponsor the successful candidate in his/her application to NSERC for the fellowship. We are particularly interested in applicants from the area of plant ecology who will establish an active research program, and who wish to become involved with our graduate and undergraduate programs in ecology. Applicants should send curriculum vitae, a statement of their immediate research plans, and the names of three referees to: **The Chair, URF Search Committee (Ecology), Department of Botany, Erindale College, University of Toronto, Mississauga, Ontario L5L 1C6**, not later than 30 June 1988.

The University of Toronto encourages both women and men to apply for positions.

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

CHAIRPERSON

Department of Physiology and Pharmacology, Bowman Gray School of Medicine of Wake Forest University, Winston-Salem, North Carolina. Applications and nominations are invited for the position of Chairperson of the Department of Physiology and Pharmacology. The candidate must be qualified for faculty appointment at the rank of professor and possess an active research program. A strong record of scholarly achievement, and leadership qualities and administrative skills necessary to develop the academic programs in the department are essential qualifications. *Affirmative Action/Equal Opportunity Employer.* Send a complete, current curriculum vitae, and names and addresses of references to: **W. Keith O'Steen, Ph.D., Chairman, Search Committee, Professor and Chairman, Department of Anatomy, Bowman Gray School of Medicine, Winston-Salem, NC 27103.**

CHAIRPERSON, DEPARTMENT OF PEDIATRICS: The University of Mississippi Medical Center invites nominations for the position of professor and chairperson of the Department of Pediatrics. A candidate should be Board-certified in pediatrics; have extensive teaching experience; and be an established investigator with a record of scholarly contributions and participation in appropriate professional organizations. Candidates with administrative background are preferred. The Mississippi Medical Center in Jackson is Mississippi's only academic health center. There are four health professional schools on the campus—Schools of Medicine, Nursing, Health Related Professions and Dentistry; graduate programs in the medical sciences; and the 541-bed University Hospital, teaching hospital for all programs. The University's Children's Hospital has 93 beds and 108 bassinets—36 intensive care; 28 level II; and 44 normal newborn. Those who wish to submit a nomination should send the nominee's name, curriculum vitae, and names and telephone numbers of three references to: **Dr. Tate Thigpen, Chairman, Search Committee, c/o the Department of Medicine, the University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216–4505.** Application deadline is 1 August 1988. *Equal Opportunity Employer, M/F/H/V.*

DIABETES RESEARCH/ANATOMIST

Anatomist, Ph.D. Four years of experience. To conduct research, as a team leader, on the biology of the extracellular matrix as it relates to diabetes, including its long-term vascular complications. Candidates must have expertise in the investigation of the extracellular matrix, particularly the synthesis, ultrastructure, molecular anatomy, and molecular biology of basement membranes. Salary commensurate with qualifications. Interested persons should send their curriculum vitae and the names of three references to: **Diabetes Search, Department of Anatomy and Cell Biology, Box 439, Medical Center, University of Virginia, Charlottesville, VA 22908.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

CHAIRPERSON, DEPARTMENT OF PHYSIOLOGY AND BIOPHYSICS: The University of Mississippi Medical Center invites nominations for the position of professor and chairperson of the Department of Physiology and Biophysics. Candidates should have extensive teaching experience and be established investigators with a record of scholarly contributions and participation in appropriate professional organizations. Candidates with administrative background are preferred. The Medical Center in Jackson is Mississippi's only academic health center. There are four health professional schools on the campus—Schools of Medicine, Nursing, Health Related Professions and Dentistry; graduate programs in the medical sciences; and the 541-bed University Hospital, teaching hospital for all programs. The Department of Physiology and Biophysics has campuswide teaching responsibilities. The department is particularly noted for its research in cardiovascular, renal and endocrine physiology and for its quantitative approach to physiology, especially in the application of control systems analysis and computer simulation of physiological mechanisms. There are also active research programs in the areas of cellular, respiratory and neurophysiology. Nominations for the position should include the nominee's name, curriculum vitae, and names and telephone numbers of three references, and should be addressed to: **I. K. Ho, Ph.D., Chairman, Search Committee, c/o the Department of Pharmacology and Toxicology, the University of Mississippi Medical Center, 2500 North State Street, Jackson, MI 39216–4505.** Application deadline is 1 August 1988.

DIRECTOR OF RESEARCH LABORATORY

Academically active anesthesiology department seeks a director for its investigational laboratory. The successful candidate will hold a doctoral degree, and have experience in drug assays, pharmacokinetics, and statistical analysis. Departmental research interests include clinical pharmacology, cardiovascular physiology, management of acute and chronic pain, and obstetrical anesthesia. Rank and salary commensurate with experience.

Applicants should submit their curriculum vitae, a list of publications, statement of research experience, and the names of three references to: **Michael E. Goldberg, M.D., Director of Research, Department of Anesthesiology, Jefferson Medical College, Thomas Jefferson University, Suite 6275, 111 South 11th Street, Philadelphia, PA 19107.**

Thomas Jefferson University is an Affirmative Action/Equal Opportunity Employer.



THE ARTHRITIS & RHEUMATISM COUNCIL DIRECTORSHIP OF THE MATHILDA AND TERENCE KENNEDY INSTITUTE OF RHEUMATOLOGY

The Arthritis & Rheumatism Council for Research in Great Britain and the Commonwealth is seeking a new Director of The Mathilda and Terence Kennedy Institute of Rheumatology to succeed **Dr. Helen Muir.**

The Institute is established to carry out research into the causes and means of treatment of rheumatism and allied diseases and to facilitate the diagnosis of such diseases and publish internationally the results of such research. At the present time it has a staff of 70, with 40 research scientists in divisions of chemistry, cellular biology, clinical immunology, experimental pathology and molecular biology.

Applications are invited from scientists with outstanding and proven research records in any field of basic, clinical or applied science to lead the Institute into the 1990's.

Further details may be obtained from: **The Research & Education Secretary, The Arthritis & Rheumatism Council, 41 Eagle Street, London WC1R 4AR, UK.**

Applications should be returned to the above address by Friday, 24 June 1988.

POSITIONS OPEN

DEPARTMENT HEAD: VIROLOGY/IMMUNOLOGY, ASSOCIATE/FULL PROFESSOR

The Primate Research Institute (PRI) of New Mexico State University (NMSU) is seeking a department head for its Virology/Immunology Department. Qualifications include: Ph.D., D.V.M., or M.D. with proven experience and leadership in retroviral research. Salary: \$60,000 to \$90,000, depending upon experience and qualifications.

The successful candidate will lead a rapidly expanding research effort in retroviral diseases and hepatitis. PRI presently has a \$2-million annual research program in AIDS and hepatitis vaccine development in chimpanzees, as well as a basic therapeutic and vaccine research program in the simian immunodeficiency model. PRI has a new excellently equipped 400-square-foot P-3 laboratory, and several biocontainment animal housing modules. PRI also has a colony of 2000 macaques and 440 chimpanzees available for research. The successful candidate will be expected to lead a new department to an outstanding program in virology and immunology with emphasis on vaccine and therapeutic development for AIDS. Resources are available for additional senior positions. The salary is highly competitive in New Mexico's low cost-of-living environment. PRI employs 140 people working in toxicology, virology, reproductive biology, metabolism, surgery, and primatology. The Institute is located 50 miles from the main NMSU campus in the high desert, and 10 miles from Alamogordo and the Sacramento Mountains. Employees may choose living conditions varying from desert to alpine.

Benefits include: Group medical and hospital insurance, group life insurance, long-term disability insurance, annual and sick leave, and state educational retirement. *NMSU is an Equal Employment Opportunity/Affirmative Action Employer. Offer of employment is contingent upon verification of individual's eligibility of employment in the United States.*

Submit curriculum vitae and names of three references to: **William C. Hobson, Director, Primate Research Institute, P.O. Box 1027, Holloman AFB, NM 88330–1027.** Deadline for application is 20 June 1988.

The Department of Neurobiology, **Theodore J. Voneida, Ph.D., Chairman**, Northeastern Ohio Universities College of Medicine, is seeking candidates for a **FACULTY** (12-month, tenure-track) position at the **ASSISTANT PROFESSOR** level. We are seeking an individual whose research interests complement those of the department and are in the area of sensory neurobiology. Our present strengths are in the areas of neuroanatomy and neurophysiology, emphasizing the neural bases of learning and memory, central control of cardiac function and evolutionary neurobiology. Responsibilities include the teaching of first and second year medical students and Ph.D. level graduate students. Submit curriculum vitae, statement of research interests, and names of three references by 17 June 1988 to: **The Office of Human Resources, Northeastern Ohio Universities College of Medicine, P.O. Box 95, Rootstown, OH 44272.** *An Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION— MEDICINAL CHEMISTRY UNIVERSITY OF WASHINGTON

An assistant professor position is available beginning in September 1988. Candidates must have a Ph.D. in medicinal chemistry, organic chemistry, biochemistry, pharmacology, or a related field. Postdoctoral experience is highly desirable. Development of a strong research program is expected. Preference will be given to candidates having expertise in one of two general areas: (i) biochemical, such as protein/peptide chemistry, antibody generation, recombinant DNA techniques and site-directed mutagenesis or (ii) biophysical, such as NMR spectroscopy, computer graphics and QSAR. Teaching responsibilities will be at both the undergraduate and graduate level. Applicants should submit their curriculum vitae, a summary of a research proposal, and have three letters of recommendation sent to: **Professor William F. Trager, Department of Medicinal Chemistry BG-20, School of Pharmacy, University of Washington, Seattle, WA 98195** by 1 July 1988. *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

SCRIPPS INSTITUTION OF OCEANOGRAPHY FACULTY POSITION IN APPLIED OCEAN SCIENCE

The Scripps Institution of Oceanography (SIO) is seeking an outstanding scientist or engineer to fill a tenured or tenure-track professorial position, the level and salary commensurate with the experience of the successful applicant based on University of California pay scale. Assistant-level candidates will be expected to show evidence of their potential through letters of recommendation and a publication record appropriate for their experience. Associate- or full professor-level candidates must show evidence of a strong research record in their specialization. Applicants with an interest in conducting innovative observational work at sea will be given strongest consideration. Fields of interest include, but are not limited to, geology/geophysics/physical oceanography in the sea floor environment, ocean acoustics, coastal processes, radar oceanography, marine micrometeorology, and small-scale physical oceanography. Applicant must hold a Ph.D. degree, or be advanced to candidacy, and will be expected to teach and supervise students, primarily at the graduate level, conduct an extramurally funded research program, and participate in administrative functions of the SIO and UCSD. There is a possibility that more than one appointment can be made. Closing date for applications: 1 July 1988. Send a detailed resume (including teaching experience), copies of selected recent publications, and names of at least five references to: **Chairman-AOS, SIO Graduate Department A-008, University of California, San Diego, La Jolla, CA 92093.** An Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN CELL PHYSIOLOGY

The University of California at San Francisco expects to make an appointment to a tenure-track position in conjunction with the Lawrence Berkeley Laboratory's (LBL) Advanced Light Source (ALS). The appointment can be made at the assistant, associate, or full professor level depending upon the qualifications of the applicant. Applicants must have a Ph.D. or equivalent doctoral degree and postdoctoral experience. The ALS, a new synchrotron device currently under construction at LBL will provide a beam of unique brightness optimized for radiation in the soft x-ray and far ultraviolet domain. The new facility will provide important opportunities for new research in the life sciences. The machine's design parameters will permit the development of new generation, high resolution soft x-ray microscopy of unsurpassed potential, that will allow for natural imaging and chemical mapping of cells and subcellular components, as well as offer the possibility of carrying out dynamic measurements on cells and their substructures. Individuals are sought whose research interests can best exploit these potentials; and who will complement the research efforts of others associated with this interdisciplinary research effort. Candidates should submit two copies of their curriculum vitae, a short statement of their research interests, and the names of three references by 30 June 1988 to: **Professor S. S. Rothman, Box 0444, University of California, San Francisco, San Francisco, CA 94143.**

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

FACULTY POSITION IN PHYSIOLOGY: The Department of Physiology of the Temple University School of Medicine seeks a Ph.D. to fill a non-tenure-track position. Individual should demonstrate ability to do protein and glucoprotein purification with special emphasis on snake venom proteins. Extensive experience required in oligosaccharide purification and structural analysis. Knowledge of recombinant DNA techniques to include composition of a DNA library from snake venom glands and gene cloning. In addition, experience in reverse phase high pressure liquid chromatographic (HPLC) and radioimmunoassay techniques are also required.

Send curriculum vitae and names of three references to: **Dr. Peter R. Lynch, Temple University School of Medicine, Department of Physiology, 3420 North Broad Street, Philadelphia, PA 19140.** An Equal Opportunity/Affirmative Action Employer.

BIOMOLECULAR CHEMISTRY/ PROTEIN SEQUENCING/PEPTIDE & PROTEIN CHEMISTRY

Merck, Sharp & Dohme Research Laboratories, a leader in the discovery and development of new pharmaceutical agents for human and animal health has several openings for chemists in our Department of Biophysical Chemistry at Rahway, New Jersey. This newly organized department is dedicated to interdisciplinary research in the application of protein structural information as an early and pivotal strategy toward the design of novel medicinal agents. The department presently includes our protein X-ray crystallography team, protein NMR capability and molecular modeling support and a molecular biology group directed toward site-specific mutagenesis. We are seeking to make a major expansion in biomolecular chemistry which will serve both to enhance this interdisciplinary effort and to provide a center for excellence in basic research in the fields of peptide/protein and oligonucleotide synthesis and analysis.

Laboratory Head-Biomolecular Chemistry- The successful candidate will have a Ph.D. or equivalent degree in organic chemistry with five or more years post-doctoral experience and a strong record of creativity and accomplishment in biomolecular chemistry, with an international reputation for excellence. Research interest and experience in protein microsequencing is particularly important, including experience in the problems of purification for microsequencing. Experience in organization of a multifunction biomolecular synthesis and analysis laboratory would be desirable. You will be responsible for carrying out independent synthetic and analytical chemical research in the areas of peptide, protein, and oligonucleotide synthesis and analysis for protein structure-function studies within the interdisciplinary environment of Biophysical Chemistry, for microsequencing of proteins as part of our Molecular Biology Task Force, and for research collaborations with selected projects outside Biophysical Chemistry. You will supervise a staff of from four to ten or more chemists and biochemists, and will direct the operations of a state-of-the-art facility devoted to biomolecular synthesis and analysis. In addition to considerable responsibility for formulation of research objectives and strategies for these various departmental functions, the incumbent will be expected and encouraged to develop and maintain an active basic research effort directed at the development of new chemical and analytical methodologies directed at extending the state of the art in the areas of protein microsequencing and peptide/protein chemical synthesis.

Senior Peptide Chemist- The successful candidate will have a Ph.D. or equivalent degree in organic chemistry with 1-5 years post-doctoral experience, with some graduate or post-graduate training concentrated in synthetic organic chemistry outside the peptide synthesis area, and with experience in biochemistry and/or medicinal chemistry. You will be responsible for carrying out independent synthetic chemical research in the areas of peptide and protein synthesis in support of protein structure-function studies within the interdisciplinary environment of Biophysical Chemistry. You will supervise efforts of all or part of a project team, with some responsibilities for formulation of objectives and strategies. This supervision may extend to management of DNA synthesis and sequencing activities within the department. You will be encouraged and expected to develop and maintain an active basic research effort directed at new strategies and techniques for synthesis of peptides, particularly those directed at synthesis of protein-sized molecules.

Peptide/Oligonucleotide Chemist- The successful candidates will have a B.A., B.S., M.S. or equivalent degree in chemistry or biochemistry, with a strong emphasis on synthetic organic chemistry, and with some experience in laboratory chemistry outside formal education (for example, summer research or other research work experience). Course work in instrumental methods and/or biochemistry is essential. Instrumentation experience is desirable, including use of HPLC, and broad training in synthetic organic chemistry is preferred. Some previous experience in peptide and/or oligonucleotide chemistry is desirable but not necessary. You will carry out synthetic and analytical chemical research or problems in the areas of peptide, protein, and oligonucleotide chemistry, operating a variety of specialized automated equipment for synthesis and analysis, utilizing information from NMR, mass spectroscopy, and other analytical techniques, and also performing research using "traditional" synthetic organic chemistry.

Protein Isolation Chemists- The successful candidates will have an M.A. degree or equivalent in Chemistry or Biochemistry, with 2 or more years of experience in protein purification. Experience with purification of recombinant proteins is desirable, and experience with purification of membrane proteins would be a plus. You will carry out purification of proteins, primarily from recombinant sources, for subsequent study by biophysical techniques. Quantities of 1-500 mg of protein of extreme purity will be required, with more rigorous characterization than required for routine biological study. You will be responsible for technical aspects of purification and analysis, including participation in the various analytical procedures, including amino acid analysis, protein sequencing, and HPLC.

Interested candidates should send a resume and three letters of reference to **Ms. Theresa Marinelli, Merck Sharp & Dohme Research Laboratories, P.O. Box 2000, Rahway, NJ 07065, USA.** Merck is an equal opportunity employer, m/f.



Merck & Co., Inc.

VICE PRESIDENT FOR AGRICULTURAL AFFAIRS

Applications and nominations are invited for the position of Vice President for Agricultural Affairs at the University of Florida, Gainesville. A part of the State University System, the University of Florida is a Land-Grant institution and a member of the Association of American Universities.

The university's programs in food, agriculture, and renewable and natural resources are administered by the Vice President for Agricultural Affairs who reports directly to the President of the University. The Vice President is the administrative head of the Institute of Food and Agricultural Sciences (IFAS) which encompasses five major units: the College of Agriculture, the Agricultural Experiment Station, the Cooperative Extension Service, the School of Forest Resources and Conservation, and elements of the College of Veterinary Medicine.

The doctoral degree in an appropriate area of specialization is preferred with at least ten years of related professional work experience. Salary will be commensurate with experience and other qualifications. Nominations and applications should be submitted no later than **August 1** to: **Dr. E.T. York, Jr., chairman, Vice President Search Committee, Building 106, University of Florida, Gainesville, Florida 32611.** Applications should include a current resume and names of at least three references.

The search is conducted in accordance with Florida's open meeting and "sunshine" law.

An Equal Opportunity, Affirmative Action Employer

University of Florida

RESEARCH SCIENTIST

Hazleton Laboratories America, a multinational company based in Vienna, VA, is seeking a MS/Ph.D. or B.S. with 4-6 years experience to work in our Rockville, MD laboratory as a Project Manager for an established basic research program in transplantation biology. Candidates should have experience with inbred mouse production and quality control and/or research experience in the area of mouse immunogenetics. Supervisory and PC experience required. Hazleton offers outstanding benefits including company paid family medical/dental insurance & life insurance. Qualified candidates, please call Nora at (301) 670-9600 for more information or submit resume to:

HAZLETON LABORATORIES AMERICA, INC.
9200 Leesburg Pike, Vienna, VA 22180
(703) 893-5400 ext. 231 EOE M/F



HAZLETON
LABORATORIES AMERICA, INC.

Scientist/Postdoctoral Fellow Molecular Biology Basic Research

Genentech, Inc., a leader in the field of biotechnology, is currently seeking individuals to participate in a project to clone and express proteins for potential therapeutic use in the broad area of bone metabolism and the endocrinology of growth.

The Scientist position requires a Ph.D. in a related field and 2 or more years of postdoc experience in molecular biology. Postdoctoral candidate should have a recent Ph.D. in molecular biology or related field.

Genentech, Inc. offers an excellent salary and benefits package coupled with the opportunity to make a significant contribution to our organization. For consideration, please send your resume to: Victor Smallberg, Human Resources Department B.W., Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. An equal opportunity employer.

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**SCIENCE MAGAZINE
NEW LAB SERVICE DEPT.
1515 BROADWAY
NEW YORK, N.Y. 10036**

DIRECTOR

JOHN B. PIERCE FOUNDATION LABORATORY INC.

THE LABORATORY:

The John B. Pierce Foundation Laboratory Inc. invites applications and nominations for the position of Director. The Laboratory, an endowed institution affiliated with Yale University School of Medicine, comprises 30 professional staff and approximately 40 support personnel. The laboratory operates under a charter aimed towards exploring physical, biological and chemical aspects of man's interaction with the Environment. Topics of current research include thermal physiology, indoor air pollution, respiratory physiology, fluid balance during exercise, skeletal muscle fatigue and sensory perception.

THE CANDIDATE:

The successful candidate should be committed to excellence in research and teaching and have demonstrated outstanding individual accomplishments in both research and administration. The Director should hold an MD and/or PhD with research experience in a biomedical field. The Director will provide strong leadership in defining new areas of opportunity and in supporting and integrating current research areas of the Laboratory. The applicant should have the qualifications necessary for appointment at the professorial level at Yale University School of Medicine. Salary will be commensurate with experience.

APPLICATION:

Applications, including a detailed resume, names and addresses of three references, and other supporting documentation, should be mailed to:

Dr. James S. Douglas,
Search Committee,
John B. Pierce Foundation Lab.,
290 Congress Avenue,
New Haven, CT 06519

The closing date for applications is May 31st, 1988. Applications after May 31st may be considered until the position is filled. The John B. Pierce Foundation Inc. is an EOAA Employer.

RESEARCH ASSOCIATES IN CELL BIOLOGY

Amgen is a dynamic and growing organization that is a recognized leader in advanced biotechnology. Our leadership in the development of Erythropoietin has placed us firmly at the forefront of the industry. Our continued growth has created immediate opportunities for Research Associates in Cell Biology.

Qualified applicants should have a BS or MS in Cell Biology, or a related discipline, and 2-4 years of experience in mammalian cell culture. Responsibilities for these positions will include maintaining mammalian cell lines as well as performing a variety of IN VITRO bio-assays to support on-going exploratory research projects. Some familiarity with molecular biological techniques is highly desirable.

Amgen offers a stimulating and challenging research environment as well as an attractive location one hour northwest of Los Angeles. **Amgen** also offers an excellent compensation and benefits package. Qualified applicants should send a resume and a list of 3 references, in confidence, to:

Recruitment, Dept. #29
AMGEN
1900 Oak Terrace Lane
Thousand Oaks
CA 91320

Equal Opportunity Employer



REQUEST FOR PREPROPOSALS SUPPLEMENT TO THE UNITED STATES ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND BROAD AGENCY ANNOUNCEMENT

The U.S. Army has a special interest in preproposals for medical research directed toward defining the pathogenesis of and medical treatment for injuries sustained by exposure to VESICATING chemical warfare agents. Specific areas of interest include the following:

PATHOPHYSIOLOGY AND PHARMACOLOGY FOR MEDICAL COUNTERMEASURES STRATEGIES

- General organ systems - Route of entry and biodisposition of toxic agents as related to systemic toxicity.
- Skin effects - Toxicity, pathogenesis, and mechanisms of action; identification of the etiology of blister formation and protracted healing.
- Etiology, pathogenesis and mechanisms by which sulfur mustard initiates leukopenia and granulocyte depletion.
- Identification and validation of in vivo or in vitro systems to mold the actions of vesicant agents and pharmacological countermeasures.
- Respiratory effects - Pathophysiology, pathogenesis and sequelae of lesions, mechanisms of action and suitable pharmacological intervention.
- Ophthalmic effects - Toxicity, pathogenesis and mechanisms of photophobia and ocular damage.
- Pharmacokinetics, metabolism and pharmacodynamics of both exposure to vesicants and of candidate prophylactic and therapeutic compounds, alone and combined.

DRUG ASSESSMENT

- Development of models and criteria for the (pre-IND/NDA) identification and evaluation of antivesicant compounds which are effective as systemic pretreatment or treatment drugs (both self-aid and medical care).
- Development of models and criteria for the identification and evaluation of topical barriers which are safe and effective in the prevention of vesicant injury to skin.

MEDICAL MANAGEMENT

- Development of effective diagnostic and prognostic procedures or measures for field use to assess the extent of patient injury to include rational criteria for triage.
- Development of cumulative and acute dosimetry technology for assessment of body burden.
- Identification and development of clinical medical procedures which decrease the burden of patient care and achieve more rapid healing.
- Definition and resolution of clinical critical care issues such as treatment regimens, relief of pain and itching, wound care and respiratory support.

Threat agents of interest include sulfur mustard, lewisite, and phosgene oxime (Note that nitrogen mustard is not considered a military threat).

The goal of this research for the U.S. Army Medical Chemical Defense Program is to identify promising self aid, medical countermeasures and procedures which preserve the capabilities of the armed forces of the United States. The United States Army Medical Research and Development Command supports extramural research by competitive award of contracts. Those interested in competing for research funding under this supplement can obtain a brochure on the application process by writing to the following address:

Commander
United States Army Medical Research
and Development Command
ATTN: SGRD-ACQ (BAA)
Fort Detrick
Frederick, Maryland 21702-5012

This supplement implies no commitment on the part of USAMRDC to support in whole or in part any proposal submitted in response to the contents herein.

POSITIONS OPEN

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

The Vascular Research Division, Department of Pathology invites applications for a faculty position, at an academic rank of assistant-associate professor, in the area of extracellular matrix biochemistry/molecular biology as it relates to vascular disease. Applicants (M.D., Ph.D., Ph.D./M.D.) will be expected to develop a strong independent research program with external funding, as well as to interact with members of a well-established vascular research group in areas of mutual interest. Candidates should, by 9 June 1988, send their curriculum vitae and bibliography, names of three references, and description of research interests and plans to: **Dr. Michael A. Gimbrone, Jr., Director, Vascular Research Division, Department of Pathology, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115. An Equal Opportunity Employer.**

FACULTY POSITIONS: BIOCHEMISTRY/MOLECULAR BIOLOGY. Applications are invited for two positions as assistant professor beginning 1 September 1988. Candidates must have Ph.D., postdoctoral experience, and a plan for an independent research program. Positions involve teaching at undergraduate, graduate, and medical school levels. Send curriculum vitae and references to: **Chairman, Search Committee, Department of Biochemistry, Science Research Building, North Texas State University (NTSU), Denton, TX 76203. NTSU/Texas College of Osteopathic Medicine is an Equal Opportunity/Affirmative Action Employer.**

FORENSIC TOXICOLOGIST

Associated Pathologists Laboratories, a progressive regional laboratory, has an immediate opening in forensic toxicology. Applicants must have "hands on" experience in forensic or clinical toxicology with practical knowledge of GC, TLC, HPLC, and GC/MS. Send résumé to: **Jo Anne Edwards, M.T. (ASCP), Associated Pathologists Laboratories, 4230 South Burnham Avenue, #250, Las Vegas, NV 89119.**

GEOCHEMISTRY

Scripps Institution of Oceanography of the University of California at San Diego (UCSD) invites applications for one or more **FACULTY POSITIONS** in the geochemistry of the ocean, of the solid earth, and of the atmosphere. The level and salary will depend upon the qualifications of the candidate and be based on UC pay scale. Assistant professor level candidates will be expected to show evidence of their potential through a publication record appropriate for their experience and letters of recommendation; associate and full professor level candidates must show evidence of a strong research record. Candidates must hold the Ph.D. degree, or be advanced to candidacy, and have demonstrated excellence in their specialization of research. Please send a letter of application, curriculum vitae including teaching experience, and names of five references to: **Chairman-K, A-008, Scripps Institution of Oceanography, UCSD, La Jolla, CA 92093, before 1 July 1988. An Equal Opportunity/Affirmative Action Employer, and not a bad place to live.**

HEAD DEPARTMENT OF ENTOMOLOGY

The College of Agriculture and Life Sciences of North Carolina State University is inviting applications for Professor and Head, Department of Entomology. The Head has overall responsibility for the leadership of a large and diverse department with fully integrated programs in teaching and graduate training, research and extension. Applicants must have earned the Ph.D. in entomology or closely related discipline, have a record of professional achievement in the field, and have a commitment to teaching, research and extension appropriate to a land-grant university. The headship should be viewed as a full-time administrative position, and administrative experience is preferred. The position is available immediately. Applications should include a résumé, names of at least three references and a brief statement of career goals. Screening of applications will begin 15 July 1988 and continue until a suitable candidate is found. Address applications to: **Dr. Daniel L. Solomon, Entomology Head Search Committee, Department of Statistics, Box 8203, North Carolina State University, Raleigh, NC 27695. Telephone: 919-737-2420.**

POSITIONS OPEN

HERPETOLOGY SCIENTIFIC ASSISTANT

The Department of Herpetology and Ichthyology of the American Museum of Natural History is seeking a scientific assistant to assist curators with our distinguished collection of amphibians and reptiles. Responsibilities will include the preparation of research materials, data collection, microscopic preparation of slides, staining of specimens, maintaining the Department's live specimens and bibliographic files.

Qualified candidates must have a baccalaureate degree in the biological sciences; some familiarity with amphibians and reptiles or training in vertebrate biology. The ability to use dissecting microscope for producing pen and ink drawings is desirable. Salary: \$19,534 per annum. Excellent benefits. For consideration, please forward résumés to the attention of: **Mr. Lee Vilensky, Personnel Department, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024. An Equal Opportunity Employer.**

IMMUNOLOGIST-VIROLOGIST—The Stephen F. Austin State University Biology Department invites applications for a tenure-track position of assistant professor. A Ph.D. is required with substantial training in biochemistry. Duties include teaching immunology, virology, introductory biochemistry, and introductory biology; research and publication will be expected. Salary commensurate with training and experience. Duties begin in August and closing date for application is 15 June 1988. Send curriculum vitae and have three letters of recommendation sent to: **W. V. Robertson, Search Committee Chairman, Box 13003 SFA, Nacogdoches, TX 75962. An Equal Opportunity/Affirmative Action Employer.**

INSTRUCTORSHIP—A non-tenure-track teaching research position is available in the Basic Sciences Division of the Ohio University College of Osteopathic Medicine for a person holding a Ph.D., D.O., or M.D. degree. Teaching responsibilities include microbiology and immunology laboratory instruction to first-year medical students and some formal lecturing at the graduate and undergraduate level. A directed research experience will deal with plasmid-mediated pathogenicity of *Acinetobacter calcoaceticus* and the interaction of these bacteria with non-oxidative antimicrobial components isolated from polymorphonuclear leukocyte granules. Prior postdoctoral experience is not required. The salary level is \$18,000 to \$21,000 with support expected for a 3-year period. An excellent benefits package and working environment is provided. Interested persons should send a curriculum vitae, and three letters of recommendation by 15 June 1988 to: **Malcolm Modrzakowski, Ph.D., 353 Irvine Hall, Ohio University College of Osteopathic Medicine, Athens, OH 45701. Ohio University is an Affirmative Action/Equal Opportunity Employer.**

SCRIPPS INSTITUTION OF OCEANOGRAPHY/MARINE BIOLOGY

Applications are invited for one or more **ASSISTANT, ASSOCIATE, OR FULL PROFESSOR** (tenure-track/tenured) positions; rank, level and salary will be commensurate with qualifications and experience, based on University of California pay scale. Research areas of interest are: (i) biomechanics of marine organisms, (ii) evolutionary studies of marine organisms using the techniques of molecular biology, and (iii) marine botany, especially biochemical, molecular or physiological aspects. Candidates will be expected to conduct an active research program supported by extramural funds and to be involved in graduate teaching and the supervision of graduate students. Applicants must hold a Ph.D. degree, or be advanced to candidacy, in an appropriate field and have demonstrated excellence and independence in research. Associate or full professorial level candidates must show evidence of a strong research record; assistant level candidates will be expected to show evidence of their potential through publication record appropriate for their experience and letters of recommendation. Send letter of application including description of research interests, list of publications, résumé of teaching experience and names of at least five references to: **Chairman (MB), Graduate Department, A-008, Scripps Institution of Oceanography, University of California, San Diego, La Jolla, CA 92093. Closing date for applications is 1 July 1988. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

MANAGER BIOTECHNOLOGY

Utah State University (USU) Center for Biotechnology is seeking a qualified candidate to fill the position of Manager of Biotechnology Service Laboratories. This is a challenging position, operating the service laboratories and managing the center. Experience in the synthesis of peptides and DNA as well as protein sequencing highly desirable. Must possess good interpersonal skills; a background involving management is advantageous but not essential. Salary is commensurate with degree and experience. Applicants should send their résumé and names of three references to: **Dr. S. D. Aust, Director, Center for Biotechnology, Utah State University, Logan, UT 84322-4430 by 31 May 1988.**

USU is an Affirmative Action/Equal Opportunity and Immigration Reform and Control Act Employer.

MOLECULAR CELL BIOLOGIST/IMMUNOLOGIST THE UNIVERSITY OF CHICAGO THE BEN MAY INSTITUTE AND THE DEPARTMENT OF PATHOLOGY

The Ben May Institute and the Department of Pathology of the University of Chicago are seeking applicants for at least two junior faculty positions. We are committed to developing strong programs in the molecular aspects of the control of cell growth and differentiation. We are seeking outstanding individuals who are using the approaches of molecular biology or cell physiology to examine basic mechanisms of cell signaling events or regulation of gene expression. Existing related research programs in the Ben May Institute and the Department of Pathology include molecular and genetic aspects of receptor signalling mechanisms involving steroid hormone receptors, growth factor receptors, and T lymphocyte activation and regulation. Candidates should have sufficient research experience to demonstrate both significant accomplishment and outstanding promise. Letters of application including curriculum vitae, bibliography, a brief statement indicating research interests, and the names of three references should be sent to: **Dr. Frank Fitch, Director, Ben May Institute, The University of Chicago, Box 424, 5841 South Maryland Avenue, Chicago, IL 60637.**

MOLECULAR CYTOGENETICIST

The Coriell Institute for Medical Research invites applications, nominations, and inquiries for a position in molecular cytogenetics. Responsibilities include directing a cytogenetic laboratory conducting confirmatory karyotype analyses of cultures received by the Human Genetic Mutant Cell Repository using state-of-the-art chromosome banding techniques including in situ hybridization for gene localization. Additional funds are available to develop an independent research program. A joint medical school faculty appointment is available. Newly constructed laboratory space and technical assistance will be provided. Salary commensurate with qualifications. Please send curriculum vitae and names of three references to: **Dr. Gerard McGarrity, President, Coriell Institute for Medical Research, Copewood Street, Camden, NJ 08103. Affirmative Action/Equal Employment Opportunity.**

NEUROPSYCHOLOGY RESEARCH FELLOWSHIP NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE

The Laboratory of Neuroscience (LNS), National Institute on Aging, seeks a neuropsychologist to conduct research on the effects of pharmacological manipulations on memory, cognition, and motor function. LNS conducts multidisciplinary research on brain function in healthy aging, Alzheimer's disease and related disorders, and Down's syndrome. The neuropsychopharmacological research program will investigate basic brain functions as well as evaluate the therapeutic efficacy of drugs in the dementias. The position is a Staff Fellow or Senior Staff Fellow located in Bethesda, Maryland, with a salary range of \$20,000 to \$43,452 commensurate with qualifications. Related research experience and a Ph.D. in neuropsychology or physiological psychology are required. Applicants should send curriculum vitae to: **James V. Haxby, Ph.D., Laboratory of Neurosciences, NIA, 9000 Rockville Pike, Building 10, Room 12S207, Bethesda, MD 20892. NIH is an Equal Opportunity Employer.**

The University of Iowa College of Medicine is seeking to recruit a distinguished scientist with a record of scientific leadership to fill an **ENDOWED CHAIR IN ONCOLOGY AND MOLECULAR BIOLOGY**. These areas are broadly defined in the context of growth and development and may include individuals whose work is not normally viewed as restricted to cancer. This position carries with it a substantial commitment in research support and space. The salary will be commensurate with experience. Please address letters of interest or nomination to:

Dr. P. Michael Conn
Search Committee Chairman
Professor and Head of Pharmacology
2-454 Bowen Science Building
The University of Iowa College of Medicine
Iowa City, IA 52242

The University of Iowa is an equal opportunity affirmative action employer.



Fishery Scientist

FISH POPULATION DYNAMICS

A\$28,942 pa to A\$42,174 pa
 DIVISION OF FISHERIES, MARINE LABORATORIES
 HOBART, TASMANIA (AUSTRALIA)

THE DIVISION: The CSIRO Divisions of Fisheries Research and Oceanography collectively form the CSIRO Marine Laboratories. The Division of Fisheries Research undertakes studies into biology, ecology and population dynamics of marine populations (both plant and animal) and supplies information for the development of management strategies for fisheries within the A.F.Z. The Division currently employs about 140 staff of whom 80 are professional research staff. Laboratories are located in Hobart, Perth and Brisbane. The Division has a well equipped charter vessel (53 m) available for research.

THE PROGRAM: Within the Fish Population Dynamics Section a program is established to conduct research into the trawl fishery of the continental shelf and shelf slope in Southeast Australian waters. Most of the catch is obtained by otter trawling and Danish seining, with 10 species comprising the bulk of the catch. This fishery is regarded as a national resource of Australia and is managed via a management committee.

THE JOB: The appointee will undertake research into the population dynamics of exploited fish stocks in mixed stock fisheries, and develop and evaluate management strategies for these fisheries. This will require both integration of information currently available through advisory and management agencies and development of biological research projects and collection of fishery data. The appointee will provide ongoing advice to the research and management agencies of the S.E. trawl fishery.

THE PERSON: Applicants should hold a PhD degree or equivalent qualifications in quantitative Zoology or Fisheries Biology with experience in methods of assessment of exploited populations. Demonstrated mathematical ability, particularly in the development and application of mathematical methods and models in a biological context is essential. They should have familiarity with computer programming and its application to scientific problems. Post-graduate experience in population dynamics and stock assessment would be an advantage.

CONDITIONS: Appointment will be for an indefinite term and Australian Government Superannuation benefits available.

MORE INFORMATION: Prospective applicants are invited to telephone Dr K. Sainsbury on (002) 20 6222 for further information. Dr Sainsbury can also provide a copy of the detailed job description and selection criteria.

APPLICATIONS: Applications should be submitted by June 7 1988 and quote reference number A2405. They should be framed against the selection criteria and should state relevant personal particulars including details of qualifications and experience. Applicants should nominate at least two professional referees, and address their applications to:

The Chief
 CSIRO Division of Fisheries, Marine Laboratories
 GPO Box 1538
 HOBART 7001 (AUSTRALIA)

CSIRO is an Equal Opportunity Employer



Research Scientist

BioTechnica International, Inc., a company specializing in the development of next-generation technologies in the areas of microbial production systems, biochemical engineering and agricultural biotechnology, has an opening at its Cambridge, Massachusetts, facility for a highly motivated Ph.D. scientist in the area of amino acid biosynthesis. The ideal candidate will have several years' experience in the following areas: genetic engineering of biosynthetic pathways, molecular biology, microbial physiology and gene expression. The position involves hands-on work to engineer organisms for the production of amino acids and other specialty chemicals. The position will be filled about July 1, 1988, at a salary commensurate with experience.

BTI offers competitive salaries and excellent employee benefits. **Please send a letter of application referring to position number RS16, a C.V., and names of three references to:**

Personnel Department
BioTechnica International, Inc.
85 Bolton Street
Cambridge, MA 02140

BIOTECHNICA
INTERNATIONAL, INC.

Senior Investigator Analytical Chemistry

The Department of Analytical Chemistry at Smith Kline & French Laboratories, located in suburban Philadelphia, Pennsylvania, is seeking a qualified candidate to join an innovative, collaborative and expanding analytical section. Primary responsibilities will include:

- Plan and initiate action plan to meet the requirements of research and development programs and of IND and NDA submissions. Assist in collaboration with project and program teams.
- Review and critically analyze data to determine if they are consistent with what would be expected based on the known history of the sample and prior knowledge and experience. Furnish final reports including those requested by the project team.
- Evaluate biopharmaceuticals and proteins of research interest following discussion with the submitting scientist or research team.
- Plan the immunological/bioanalytical approach and develop new methodology as necessary to solve specific problems, consulting supervisor as appropriate. Apply state-of-the-art immunological bioanalytical techniques including ELISA, Western Blotting, Electrophoresis, generation of monoclonal and/or polyclonal antibodies, analytical methods of protein analysis to assay biopharmaceutical drug substances.
- Plan the distribution of work among subordinates and schedule it to meet target dates imposed by project teams.

Desirable qualifications for the successful candidate will include:

- Ph.D. in Biochemistry/Immunology with a minimum of 4 years postdoctoral experience required, preferably in an industrial setting.
- Experience with Immunological and biochemical methods of protein analysis required.
- Demonstrated ability to work independently in area of expertise.
- Excellent written and verbal communication skills required.
- Experience with the analysis of biopharmaceutical drug substances preferred.
- Experience with writing data for regulatory agency submissions preferred.
- Supervisory experience strongly preferred.

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. For confidential review, please forward your C.V. and names of three references to: Marianne J. Shandy, Manager, Personnel Relations-J0006, 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

RESEARCH SCIENTISTS

Integrated DNA Technologies, Inc. is seeking qualified scientists to conduct research in exciting new areas of clinical diagnostics and therapeutics. These positions will provide an opportunity for original research and leadership within a growing organization.

All positions require a Ph.D. degree; relevant postdoctoral or industrial experience would be desirable.

MOLECULAR BIOLOGIST: Experience in recombinant DNA technology and DNA probe hybridization systems, with some background in clinical or diagnostic microbiology.

VIROLOGIST: Experience in clinically relevant virology, recombinant DNA technology, and tissue culture; for research on antiviral therapeutics.

BIOCHEMIST/ENZYMOLOGIST: Experience in protein and enzyme chemistry, mechanisms, modifications, and purifications; as related to the nucleic acids area.

NUCLEIC ACID CHEMIST: Experience in the synthesis, modification, and purification of RNA.

In addition to a stimulating scientific environment, we offer a competitive compensation/benefit package and relocation assistance. IDT is located in an attractive midwestern community and is in close proximity to a major university and medical school complex. Please send a resume and description of research experience to: **Personnel, Integrated DNA Technologies, Inc., Tech Innovation Center, Oakdale Campus, Iowa City, IA 52242.**

IDT

INTEGRATED
DNA
TECHNOLOGIES, INC.

RESEARCH ASSOCIATE PROTEIN CHEMISTRY

Amgen is an innovative and dynamic organization producing products for human health care through applied biotechnology. Our leadership in the development of Erythropoietin and other products has placed us firmly at the forefront of the industry. As a result of our continued growth, we have an immediate opportunity for a Research Associate in our Protein Chemistry Group.

Responsibilities for this position will include protein characterization, protein purification and instrument maintenance.

Qualified candidates must have a BS or MS in Chemistry, Biochemistry, Engineering or Physics and 1-2 years' experience with spectrophotometric analysis including UV, fluorescence, phosphorescence or CD. Familiarity with PC-based computers is essential.

Amgen offers an exciting and challenging research environment as well as an excellent compensation and benefits package. **Amgen** is located about an hour's drive northwest of Los Angeles in the scenic Conejo Valley.

Qualified applicants should send a resume, including references, in confidence to:

**Recruitment Dept. #306
AMGEN
1900 Oak Terrace Lane
Thousand Oaks, CA 91320**



Equal Opportunity Employer

Postdoctoral Scientists Molecular Genetics

Smith Kline & French Laboratories, a leader in pharmaceutical research, is seeking additional postdoctoral scientists to expand its current research programs employing recombinant DNA technology.

Excellent opportunities exist for innovative interdisciplinary research in our superbly equipped Research & Development Center in suburban Philadelphia near Valley Forge, PA.

The Department of Molecular Genetics is seeking outstanding Ph.D. scientists to pursue research on:

- Molecular Genetics of T-cell activation
- Tumor necrosis factor action at the molecular and cellular level
- Molecular genetics of yeast (*S. cerevisiae* and *C. albicans*)

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. Publication of research results is encouraged and supported. For confidential review, please forward your C.V. and names of three references to: Barbara J. Schwartz, S0047, Associate Employment Administrator, Smith Kline & French Laboratories, Research & Development Division, 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

Cardiovascular Research

Somatogenetics International (**SOMATOGEN**), an established biotechnology company located in the foothills of the Rocky Mountains, is expanding its program in cardiovascular therapeutics. We have immediate opportunities for Staff Scientists and Post-Doctoral Fellows in the following areas:

MOLECULAR BIOLOGY

Ph.D. level **YEAST** and **PROKARYOTE MOLECULAR BIOLOGISTS** expert in high-yield expression of novel recombinant proteins.

PROTEIN CHEMISTRY

Ph.D. level **PROTEIN BIOCHEMIST** with experience in state-of-the-art purification of protein pharmaceuticals on both laboratory and large scale.

Ph.D. level **PROTEIN BIOCHEMIST** with experience in the chemical modification and/or immobilization of enzymes.

FERMENTATION SPECIALIST

Individual with strong background in biochemical engineering and fermentation scale-up.

REGULATORY AFFAIRS

Individual with proven experience in FDA regulatory matters, GLP/GMP standards and human clinical trials.

SOMATOGEN offers an attractive fringe benefit package and competitive salaries commensurate with productivity. Please send *curriculum vitae* and names of three references in confidence to:

**PERSONNEL DIRECTOR
SOMATOGENETICS INTERNATIONAL, INC.
350 INTERLOCKEN PARKWAY
BROOMFIELD, CO 80020**

SOMATOGEN

an equal opportunity employer

Announcement THE ARGONNE FELLOW PROGRAM

Argonne National Laboratory has established the position of Argonne Fellow to attract outstanding scientists and engineers to the Laboratory for extended periods, up to one to two years. Candidates should be distinguished scientists and engineers, at points of prominence in their careers. Multidisciplinary interests, creativity, and ability to interact with and motivate others, plus recognized preeminence in a field of current or potential importance to the Laboratory, are among particular attributes sought.

Argonne's primary purpose as a non-profit research and development organization is to explore energy sources and investigate the fundamentals of physical, chemical, and biological sciences. It is engaged in nuclear reactor development,

energy and environment
R&D, biological,
medical, chemical,
nuclear and high
energy physics,
and materials
science research.



During their period of residence, Fellows may choose to become associated primarily with the programs of a specific Argonne division, or they may elect to pursue interdisciplinary activities that cut across current organizational structures. In addition, the Argonne Fellow may make significant contributions to the technical environment of the entire region through interactions in the industrial and university communities.

Residency will be flexible to meet mutual objectives. Typical Fellow residency will be for one year, but a series of shorter periods in residence could be accommodated.

Financial support and other perquisites will be sufficiently attractive to command the attention of prestigious candidates.

All responses will be reviewed by the Argonne Fellow Committee. Credentials should be forwarded to: Ronald A. Johns, Appointment Officer, Employment and Placement, Box D-51, Argonne National Laboratory, 9700 South Cass Avenue, Argonne, IL 60439.

An equal opportunity/affirmative action employer

PROTEIN CHEMISTS

At Hoffmann-La Roche, we feel that one good leader deserves another. If you're on the leading edge of protein chemistry, consider a position with one of the world's most respected medical and pharmaceutical research leaders. We're seeking three accomplished individuals to join our Molecular Structure Group, which has existing laboratories in protein crystallography, biomolecular NMR, computational chemistry and molecular graphics. The Group also has extensive involvements with our Molecular Genetics, Pharmacology and Medicinal Chemistry Departments.

You will be responsible for tailoring genetic engineering, expression and purification of proteins for structural determinations, via crystallography and NMR spectroscopy. You will also perform functional and mechanistic studies on the proteins, and participate in the design of pharmaceutical agents. Proteins to be investigated include HIV proteins, enzymes involved in inflammation and bacterial growth, and receptors for lymphokines, leukotrienes and peptide hormones.

SENIOR SCIENTIST

You must have a PhD in Chemistry or Biochemistry, along with protein purification experience. In addition, knowledge of genetic engineering, FPLC and protein expression would be

highly preferred; postdoctoral experience and a strong interest in protein structure are highly desirable. **Please respond to Eleanor M. Malone, Dept VM at the address below.**

POSTDOCTORAL RESEARCH ASSOCIATE

You should have a PhD in Chemistry or Biochemistry along with protein purification experience. Knowledge of FPLC and protein expression, along with a strong interest in protein structure are highly desired. **Please respond to Dr. Vincent Madison at the address below.**

ASSOCIATE SCIENTIST

You should have a BS or MS in Chemistry or Biochemistry and biochemical skills. Experience in protein purification and handling small amounts of material are desirable. **Please respond to Frances Newman, Dept MH at the address below.**

In return, we offer attractive salaries and benefits programs, and the scientific resources you'll need for professional satisfaction. For consideration, please send your resume to the person and department indicated above, at: **Hoffmann-La Roche Inc., Nutley, New Jersey 07110.** We are an equal opportunity employer.



Hoffmann-La Roche

Working Today For A Healthier Tomorrow

POSITIONS OPEN

MOLECULAR MICROBIOLOGIST: Tenure-track faculty position available 1 September 1988. Candidates must have at least 2 years of postdoctoral experience. The appointee is expected to develop an independent research program with a molecular orientation in some area of microbiology and to participate in teaching medical, dental and graduate students. Rank and salary commensurate with qualifications. Send curriculum vitae, statement of research objectives, and names of three references by 15 July 1988 to: **Dr. L. William Clem, Department of Microbiology, University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216-4505. Equal Opportunity Employer, M/F/H/V.**

PEPTIDE CHEMIST/ MOLECULAR NEUROBIOLOGIST

A faculty position is available at the assistant professor level for a Ph.D. with training and expertise in peptide chemistry, tissue culture and molecular neurobiology to join a developing program in neuroendocrine peptide biology and physiology. A track record of research accomplishment and possession of laboratory management skills essential. Send application, including curriculum vitae and names of three references by 5 July 1988 to: **Ivor Jackson, M.D., Director, Division of Endocrinology, Brown University, Rhode Island Hospital, Providence, RI 02903. An Equal Opportunity/Affirmative Action Employer.**

PHARMACOLOGIST/NEUROPHARMACOLOGIST: Assistant professor (non-tenure)/instructor/postdoctoral fellow to join major neuroscience laboratory with interest/experience in receptors, second messengers in CNS related to autonomic regulation. In vivo/in vitro, classical bioassay, and/or autoradiography techniques useful. Strong interaction with biochemists, and molecular and cell biologists. Send curriculum vitae and bibliography to: **D. J. Reis/M. P. Meeley, Laboratory of Neurobiology, Cornell University Medical College, 411 East 69th Street, New York, NY 10021. Equal Opportunity Employer/Affirmative Action/M/F/H/V.**

PHARMACOLOGY CHAIRMAN

The University at Buffalo (SUNY) is seeking a chairperson for the Department of Pharmacology and Therapeutics at the School of Medicine and Biomedical Sciences. The Department presently has 13 full-time and 1 part-time state-funded faculty positions. The Department has a diverse research program and has strength in neuropharmacology and toxicology. The successful candidate must have a well-established and active research program in pharmacology or related discipline. The candidate should have a national and international reputation preferably in an area of cellular or molecular pharmacology although other areas of research interest will also be considered. Persons interested in this position should send curriculum vitae, a description of research activities and administrative experience, and the names of three references to: **Dr. Murray W. Stinson, Department of Microbiology, School of Medicine and Biomedical Sciences, University at Buffalo (SUNY), Buffalo, NY 14214. All materials must be received by 15 July 1988.**

SUNY is an Equal Opportunity/Affirmative Action Employer.

ST. GEORGE'S UNIVERSITY SCHOOL OF MEDICINE GRENADA, WEST INDIES

The University anticipates 1989 OPENINGS IN PHYSIOLOGY AND IN PHARMACOLOGY. Prior medical school teaching experience is required. Initial appointments are for 1 year, with renewals possible for periods of 1 to 3 years.

There is also a short-term position beginning January 1989 for a laboratory demonstrator in histology.

Applications will be considered from recent retirees. Level of appointment will depend on the background of applicants. Send curriculum vitae and teaching references to:

Dean of Basic Sciences
St. George's University School of Medicine
c/o Foreign Medical School Services Corporation
One East Main Street
Bay Shore, NY 11706

POSITIONS OPEN

PHYSIOLOGIST—Beaver College in Glenside, Pennsylvania (suburban Philadelphia) invites applications for a full-time, 1-year position with possibility of tenure-track, as physiologist at the level of assistant professor. Ph.D. preferred. Teaching responsibilities include introductory level biology, human physiology, and comparative physiology. Research desirable. Send curriculum vitae, and three letters of recommendation to: **Dr. William Ball, Chairperson, Department of Biology, Beaver College, Glenside, PA 19038. Closing date 3 June 1988. An Affirmative Action/Equal Opportunity Employer.**

POPULATION SPECIALIST

The Population Council, an international nonprofit organization, is seeking a population scientist to collaborate with faculty at The University of Zimbabwe in developing a Master's level program in population studies in the Department of Demography focusing on imparting demographic skills, population-development concepts and research methods. Doctoral degree in the social sciences with a specialization in demography together with graduate level teaching experience for at least 3 years necessary. Residential experience in sub-Saharan Africa or developing countries desirable. Send curriculum vitae to: **Dr. George F. Brown, Vice President and Director, International Programs, The Population Council, One Dag Hammarskjold Plaza, New York, NY 10017.**

POPULATION SPECIALIST

The Population Council, an international nonprofit organization, is seeking a population scientist to collaborate with faculty at The Population Studies and Research Institute at the University of Nairobi in developing a stronger and more focused program of research and in carrying out expanded dissemination activities. Doctoral degree in the population sciences together with strong background in resource economics, political science or cultural anthropology necessary. Must have made contribution to research and/or teaching at the University level for at least 10 years. Candidates from or with extensive research experience in Africa, Asia, or Latin America especially encouraged to apply. Send curriculum vitae to: **Dr. George Brown, Vice President and Director, International Programs, The Population Council, One Dag Hammarskjold Plaza, New York, NY 10017.**

POSTDOCTORAL ASSOCIATE position(s) available in a neuroscience laboratory which studies neurotransmitter release due to pain and analgesia, especially with respect to substance P and excitatory amino acids. Experience doing HPLC, receptor binding or in vivo microdialysis is desirable. Ph.D. in biological sciences required. Positions available to start between 15 June 1988 and 15 June 1989. Send curriculum vitae as soon as possible and/or before 15 May 1989 to: **Alice A. Larson, Ph.D., Department of Veterinary Biology, University of Minnesota, 1988 Fitch Avenue, St. Paul, MN 55108. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.**

POSTDOCTORAL FELLOW—Position available immediately to investigate the sympathetic nervous system using biochemical and molecular biology techniques. Functional changes following exposure to acute and chronic stress will be examined at the cellular and molecular level. Previous experience measuring protein kinase activities, Northern/Southern blots. HPLC phosphopeptide analysis, gel electrophoresis/autoradiography or the use of monoclonal antibodies for immunocytochemical localization at the EM level preferred. The opportunity to learn embryo transfer/genetic engineering techniques is also available. Contact: **Dr. Rick Vulliet, Department of Veterinary Pharmacology and Toxicology, University of California, Davis, CA 95616. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOWSHIP IN NEUROPHYSIOLOGY/NEUROPHARMACOLOGY to study effects of acute and chronic ethanol at defined sites within the CNS. Experience with extracellular electrophysiology and pressure ejection is desirable. Funding is through an NIAAA training grant. Stipend: \$16,000 to \$26,000. Send curriculum vitae and names and addresses of references to: **Larry P. Gonzalez, Ph.D., University of Oklahoma Health Sciences Center, Research Building, 306-R, P.O. Box 26901, Oklahoma City, OK 73190. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

POSTDOCTORAL FELLOW—ANALYTICAL CHEMISTRY/NEUROCHEMISTRY. Experience in basic instrumental aspects of HPLC (optimization of detector systems and packing technology) and in the development of HPLC methods desirable. Major aim of research will be development of improved neurochemical analyses.

Please send curriculum vitae and outline of research interests by 1 July 1988 to: **Dr. George M. Anderson, Yale Child Study Center, P.O. Box 3333, New Haven, CT 06510.**

An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP available for studies on the molecular basis of cell differentiation. Limited to those with recent doctorate. Prefer background in molecular biology. Send curriculum vitae and letters of reference to:

**Frank E. Stockdale, M.D., Ph.D.
Stanford School of Medicine, M211
Stanford, CA 94305-5306**

Agricultural Research Service, United States Department of Agriculture, Western Regional Research Center, 800 Buchanan Street, Albany, CA 94710. POSTDOCTORAL MICROBIOLOGIST/BIOCHEMIST. GS 11/12 (\$27,716 to \$33,218). Ph.D. to work independently isolating, purifying and characterizing bacterial enzymes and binding proteins of cholesterol metabolism. Knowledge and experience with microbiology/biochemistry of microbial steroid metabolism required. Knowledge of dairy science highly desirable. Appointment to not exceed 2 years. For application procedures and qualification information contact: **Rita Millard, ARS Personnel, Beltsville, MD 20705. Telephone: 301-344-3138. Call: Dr. Michael Smith, 415-559-5865, for more technical information. An Equal Opportunity Employer.**

POSTDOCTORAL POSITION available 1 July 1988. Studies will be concerned with multidrug resistance and will primarily focus on the isolation and characterization of antibodies against synthetic peptides of P-glycoprotein. Send curriculum vitae and names of references to:

**Dr. Melvin S. Center
Division of Biology
Ackert Hall
Kansas State University (KSU)
Manhattan, KS 66506**

KSU is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION for 2 years in alcohol research available immediately. Studies include the hormonal regulation of ethanol metabolism in primary hepatocyte culture and the effects of ethanol on glutathione metabolism both in vivo and in hepatocyte culture. U.S. citizen or permanent resident. Send letter of application and curriculum vitae to: **Esteban Mezey, M.D., Professor of Medicine, The Johns Hopkins University, Hunt. 415, 725 North Wolfe Street, Baltimore, MD 21205.**

POSTDOCTORAL POSITION in biochemical endocrinology. A 2-year position is available for work on the purification and characterization of an integral plasma membrane protease activator of the uterus which is induced by estradiol. Experience with the molecular biology of membrane proteins, coagulation enzymes, and immunocytochemistry, are helpful but not essential. Send curriculum vitae and names of two references to: **Dr. K. P. Henrikson, Wadsworth Center for Laboratories and Research, Empire State Plaza, P.O. Box 509, Albany, NY 12201. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available immediately for a recent Ph.D. to study the molecular biology of atrial natriuretic peptides and their receptors. A background in molecular biology is essential. Send curriculum vitae, and names of at least three references to: **Dr. T. G. Flynn, Department of Biochemistry, Botterell Hall, Queen's University, Kingston, Ontario, Canada, K7L 3N6. This advertisement is directed in the first instance to Canadian citizens and permanent residents, in accordance with Canadian immigration requirements.**

POSITIONS OPEN

UNIVERSITY OF CALIFORNIA— RIVERSIDE POSTDOCTORAL POSITION

Postdoctoral position available immediately to study the membrane proteins of malaria-infected red cells as they relate to antigenic variation. Projects involve the preparation of monoclonal antibodies, protein purification, peptide mapping, and immunolocalization. Applicants should have a recent Ph.D. with a background in protein chemistry, hybridoma methodology, and membrane isolation.

Salary commensurate with education and experience. Applicants should send their curriculum vitae, statement of research interest, and arrange for three letters of reference to be sent to:

Professor Irwin Sherman
1140 Batchelor Hall
University of California
Riverside, CA 92521

UCR is an Equal Opportunity Employer/Affirmative Action Employer and minority and female candidates are encouraged to apply.

POSTDOCTORAL POSITION available immediately to participate in studies on hormonal and developmental regulation of gene expression in heart and skeletal muscles (*J. Biol. Chem.* 262, 13316; *Proc. Natl. Acad. Sci. USA* 87, 3122). Recent Ph.D. in biochemistry, microbiology, pharmacology, or a related field with strong molecular biology research background is preferred. Opportunity to develop independent project. Salary negotiable. Send curriculum vitae together with names of three references to: **Eugene Morkin, M.D., Director, University Heart Center, University of Arizona Health Sciences Center, Tucson, AZ 85724. An Equal Opportunity Affirmative Action Employer.** Closing date for applications is 27 May 1988.

POSTDOCTORAL POSITION is available to study the molecular basis for alphavirus neurovirulence utilizing site-directed mutagenesis of full-length cDNA clones of Sindbis or Venezuelan equine encephalitis virus genomes. Experience in molecular genetics or neuropathology is preferred. Send curriculum vitae and the names of three references to: **Robert E. Johnston, Department of Microbiology, North Carolina State University (NCSU), Raleigh, NC 27695-7615. NCSU is an Equal Opportunity Employer.**

POSTDOCTORAL POSITION available immediately for a Ph.D. in biochemistry, immunology, cell biology, pharmacology, or related areas to study the cellular and biochemical mechanisms of multidrug resistance in cancer cells. Experience in monoclonal antibody production and membrane/receptor biochemistry desirable. The position renewable up to 3 years. Applicants should send curriculum vitae, recent publications, and three letters of reference to: **Dr. Ahmad R. Safa, Joint Section of Hematology/Oncology, University of Chicago and Michael Reese Medical Centers, c/o Department of Human Resources, Lake Shore Drive at 31st Street, Chicago, IL 60616. Equal Opportunity Employer M/F.**

POSTDOCTORAL POSITION IN BIOCHEMICAL PHARMACOLOGY for recent Ph.D. interested in the biochemical modulation of anticancer drug activity. Research on the use of nucleoside transport inhibitors to increase the selectivity of antimetabolites against human tumors growing in culture or as xenografts in mice. Salary \$22,000 to \$25,000. Send curriculum vitae and four letters of recommendation to: **Judith A. Belt, Ph.D., Department of Biochemical Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, P.O. Box 318, Memphis, TN 38101. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS

One position will be in the area of bacterial chemotaxis and motility. Another position will be in the area of regulation of expression of flagella and chemotaxis genes. Experience in biochemistry and/or molecular genetics is desirable. One position is immediately available and the second position will be available in fall 1988. Send curriculum vitae and names of three references to: **Dr. Philip Matsumura, Laboratory of Cell, Molecular and Developmental Biology, University of Illinois at Chicago, P.O. Box 4348 m/c-067, Chicago, IL 60680. An Equal Opportunity Employer.**

Life Sciences Research Scientists

Eastman Kodak Exploratory Sciences Division, Life Sciences Research Laboratories has openings available in Rochester, New York. You would be in a leading and highly equipped research facility that offers an excellent working environment within minutes of the shore of beautiful Lake Ontario.

ENZYMOLLOGY

MS with experience or PhD in Biochemistry or related discipline. Successful candidate will be involved in research in the area of enzymes involved in the biosynthesis and metabolism of physiologically significant lipids. The initial challenge will be isolation and characterization of novel enzymes.

ENZYME MECHANISMS

PhD in biochemistry or related discipline. Post doctoral experience is desirable. Successful candidate will carry out detailed chemical mechanistic studies utilizing modern genetic tools on enzymes involved in lipid metabolism.

PROTEIN CHEMISTRY

BS/MS or PhD in biochemistry or related discipline. Successful candidate will be responsible for purification and initial characterization of desired proteins to provide materials to various research teams. Experience in enzyme assay and in modern methods of protein isolation, purification and characterization is necessary.

MOLECULAR BIOLOGY

MS with experience in molecular biology or related discipline. Successful candidate will be involved in research in the area of gene isolation, regulation and control in prokaryote and eukaryote systems. Initial challenge will be in cloning the desired genes and characterizing the gene products.

PhD with postdoctoral experience in molecular biology of plant pathogens. Successful candidate will be involved in research in the area of bacterial and fungal genetics and plant-pathogen interactions.

MICROBIOLOGY

BS/MS in microbiology or related discipline. Assist senior scientist in biocatalysis laboratory. Will be required to perform microbiological experiments, isolate and maintain cultures, run enzyme incubations, run enzyme assays, purify enzymes and general laboratory management and upkeep. Experience in microbiological and biochemistry procedures desirable.

Life Sciences Research Laboratories offer the entrepreneurial spirit of a new business with the goals and resources of a leading company. In addition to an excellent salary/benefit package, we provide an environment conducive to both personal and professional growth. For prompt consideration, please send your resume to: **Eastman Kodak Company, Personnel Resources Dept. DAL5, Rochester, NY 14650.**

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POSITIONS OPEN

POSTDOCTORAL POSITION available to study Ca^{2+} homeostasis in cardiac muscle tissue, including membrane ion transport and phosphoinositide metabolism. Experience in one or more of the following areas preferred: membrane biochemistry, protein purification, immunochemistry. Please send curriculum vitae and three names of references to: **Dr. M. Kirchberger, Department of Physiology/Biophysics, Box 1218, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574. An Equal Opportunity Employer.**

POSTDOCTORAL POSITION IN MOLECULAR NEUROBIOLOGY available fall 1988 to work on a project using site-directed mutagenesis to examine structural features involved in function and assembly of ACh receptors. Experience in either electrophysiology or molecular biology helpful. Send curriculum vitae and names of three references to: **Dr. Michael White, Department of Pharmacology, University of Pennsylvania, Philadelphia, PA 19104-6084.**

POSTDOCTORAL POSITIONS available immediately for studies on the structures and biosynthesis of proteoglycans. Experience in polysaccharides and/or proteins; blood coagulation; or cell culture is preferred. Send curriculum vitae and references to: **Dr. Isidore Danishefsky, Biochemistry Department, New York Medical College, Valhalla, NY 10595.**

Equal Opportunity Employer

POSTDOCTORAL POSITIONS IN VIROLOGY available immediately. Work will involve studies in replication of RNA-containing viruses. Molecular approaches to develop novel antivirals (antisense RNA, etc.). Training in molecular biological techniques will be provided. Competitive salary, subsidized housing available. Send curriculum vitae and names of three references to: **Dr. Peter Palese, Box 1124, Department of Microbiology, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574. An Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITION IN PLANT CELL AND MOLECULAR BIOLOGY available immediately for the study of factors governing the expression and targeting of foreign genes in plants and protoplasts. Will also be involved in research directed toward the development of flow cytometric procedures for the selection of transformed plant protoplasts in vivo. Must have Ph.D. in an appropriate area; experience in molecular techniques is desirable. Send curriculum vitae and names of references to: **Dr. David W. Galbraith, School of Biological Sciences, University of Nebraska-Lincoln, Lincoln, NE 68588-0118. Affirmative Action/Equal Employment Opportunity.**

POSTDOCTORAL POSITION SQUID GIANT SYNAPSE

An opportunity is available immediately to explore molecular mechanisms of neurotransmitter secretion at the 'giant' presynaptic terminal of the squid synapse. Training is available in microinjection techniques, microelectrode voltage clamp methods, and digital video imaging of intracellular Ca^{2+} signals. Funding is available for up to 5 years. Experiments will be performed virtually year-round by working in Los Angeles in the winter and Woods Hole in the summer. A background in physiology, cell biology, biochemistry, or biophysics is desirable. Send curriculum vitae and names of references to: **George Augustine, Section of Neurobiology, University of Southern California, Los Angeles, CA 90089-0371.**

POSTDOCTORAL POSITIONS available for recent Ph.D.s to participate in an active research program on the regulation of DNA repair in human cells. Current research efforts focus on the expression of DNA repair enzymes in the cell cycle and structural analysis of eukaryotic multienzyme DNA repair complexes. Submit curriculum vitae and the names of two references to: **Dr. Michael A. Sirover, Fels Research Institute, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, PA 19140. Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS available immediately to characterize human and simian immunodeficiency virus infections in chimpanzees and various monkey species in a laboratory well-established in the field of animal models for AIDS. Opportunities exist to study mechanisms of pathogenesis, molecular and biologic properties of viruses isolated from naturally and experimentally infected animals, immunologic responses to HIV and SIV of infected animals and responses of animals to therapeutic drugs and vaccines. A background in molecular biology, virology, and/or immunology and highly motivated individuals are sought. Support available for at least 2 years with salary negotiable, based on experience. Send curriculum vitae and names of three references to: **Dr. Harold McClure, Yerkes Regional Primate Research Center, Emory University, Atlanta, GA 30322. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS

Available immediately for microbial geneticists to join active DNA repair group using molecular biological, enzymatic, and immunochemical approaches. Good salary, enthusiastic group, well-funded program, great environment. Qualified candidates should submit curriculum vitae and the names of three references to: **Dr. Susan Wallace, Department of Microbiology, University of Vermont, Burlington, VT 05405.**

POSTDOCTORAL POSITIONS IN STRUCTURAL BIOPHYSICS/BIOLOGY. Two positions available on NIH-sponsored projects: (i) physical studies on sequence-dependent DNA structures; and (ii) physical studies on differential chromatin structures in salinity stressed plant systems. Applicants should have a background in basic molecular biology and an interest in physical and structural methods. Salaries commensurate with experience. Complete curriculum vitae and arrange for three letters of recommendation to: **R. E. Harrington, Department of Biochemistry, University of Nevada, Reno, NV 89557. Equal Opportunity/Affirmative Action Employer.**

SCIENTIST- DRUG METABOLISM

The Animal Drug Metabolism Department at Merck Sharp and Dohme Laboratories has three positions for a chemist/biochemist who is interested in pursuing a career in drug metabolism. The successful candidate will participate in studies of in vitro metabolism as well as absorption, distribution metabolism, and excretion of drugs in vivo. The candidate should have some knowledge of drug metabolism with demonstrated strength in modern analytical techniques, such as HPLC or RIA. Other desirable qualifications include:

B.S. degree with 3-5 years experience or M.S. degree with 1-2 years experience in chemistry/biochemistry/pharmacology or related areas.

Experience in the isolation, purification and characterization of metabolites from biological fluids.

Knowledge in data interpretation of NMR Spectroscopy or Mass Spectrometry.

Experience in handling of radiolabeled chemicals.

Skills in small animal handling or surgical techniques.

Merck Sharp and Dohme Research Laboratories is located in Rahway, New Jersey, approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. Please send resume with salary history to **Ms. Jacqueline A. Eiermann, P.O. Box 2000, Rahway, New Jersey 07065.**

Equal Opportunity Employer



Merck & Co., Inc.



Research Scientist

BioTechnica International, Inc., a company specializing in the development of next-generation technologies in the areas of microbial production systems, biochemical engineering, and agricultural biotechnology, has an opening at its Cambridge, Massachusetts facility for a highly motivated Ph.D. scientist in the area of DNA probe diagnostics. The ideal candidate will have several years' experience with nucleic acids chemistry and physical chemistry, including:

- Hybridization kinetics
- Hybridization equilibria
- Nucleic acid biochemistry/enzymology
- Nucleotide chemistry
- Chemical modification of nucleotides
- Optical detection methodology
- Automated oligonucleotide synthesis equipment and procedures

The position involves hands-on development of novel approaches to DNA probe diagnostic problems. The position will be filled about July 1, 1988, at a salary commensurate with experience.

BTI offers competitive salaries and excellent employee benefits. **Please send a letter of application referring to position number RS15, a C.V., and names of three references to:**

**Personnel Department
BioTechnica International, Inc.
85 Bolton Street
Cambridge, MA 02140**

**BIOTECHNICA
INTERNATIONAL, INC.**

The San Marino Conferences, under the auspices of the San Marino Ministry of Health, have been established to review annually the progress in selected areas of biomedical research dealing with disorders of the immune system, virus infections and cancer. The conferences will focus on modern developments of basic research and their applications in medicine. AIDS will be the theme of the first conference to be held in San Marino from October 10-14, 1988.

PRELIMINARY CONFERENCE PROGRAM

Among speakers are:

Opening Address: H. Temin (USA)

Introductory Lectures: R. C. Gallo (USA)
L. Montagnier (France)

Plenary and Scientific Sessions:

Epidemiology: N. Clumeck (Belgium)
W. Blattner (USA)
M. Essex (USA)

Cell & Molecular Biology: F. Wong-Staal (USA)
S. Wain-Hobson (France)
W. Haseltine (USA)

Virus/Cell Interactions: R. Weiss (England)
L. Laskey (USA)
M. Rosenberg (USA)

Immunology: F. Melchers (Switzerland)
E. Reinherz (USA)
H. Wigzell (Sweden)
M. Feldman (Israel)

Vaccines & Therapy: H. Koprowski (USA)
M. Hilleman (USA)
D. Bolognesi (USA)
D. Zagury (France)
S. Broder (USA)

Other Topics of Scientific Sessions:

Animal Models
Pathogenesis
Diagnostics
Clinical Care

Round Table Discussion:

Legal, Social, Economic, Ethical and Health Problems:

F. Angelini (Holy See)	R. Maxwell (England)
D. Bauris-Krey (RSM)	D. Sabiston (USA)
F. Giammanco (Italy)	E. Wynder (USA)
J. Leconte (France)	J. Wyngaarden (USA)
L. Zirimwabagangago (Zaire)	

Meeting Summary: Carlton Gajdusek

Attendance will be limited to 500 participants (100 with posters) which will be selected by a scientific committee. Applications should include, in English, an abbreviated curriculum vitae with a statement of current scientific and/or medical interests, all on one type-written page. Abstracts for poster presentation should be no longer than 200 words.

Applications should reach the

Secretariat of the San Marino Conferences
c/o Dr. Sante Canducci, Executive Director
San Marino Ministry of Health
I.47031 REPUBLIC OF SAN MARINO
Fax: (39)541-903967
Telex: (505)879
(868)879 (from USA)

no later than June 10, 1988.

Applicants will be informed of the decision of the scientific committee by July 31, 1988. Registration fee, not including accommodations and meals, will be U.S. \$250 until August 31, thereafter \$300. Only accepted participants should send the registration fee.

BIOCHEMICAL TOXICOLOGIST

Rohm and Haas Company has an immediate opening in its Toxicology Department at the Corporate Research Center in Spring House, PA, twenty miles north of center-city Philadelphia.

This scientist will work as a Study Director in the Biochemical Toxicology group, with responsibility for conducting and reporting studies to elucidate mechanisms and circumstances that might lead to toxic responses. Pharmacokinetic and *in vitro* enzymatic assays will be emphasized.

A Ph.D. in Toxicology, Pharmacology, Biochemistry, or a closely related program, and post-doctoral experience are required. Strong communicating and writing skills are necessary, as is scientific independence. Computational ability is expected.

Rohm and Haas offers a highly competitive salary and benefits program, and is committed to growth through research. Candidates must have U.S. citizenship or proof of their right to work and remain in the U.S. Interested persons should send a detailed resume, including names, addresses, and telephone numbers of three professional references, to:

Corporate Staffing #2288

ROHM AND HAAS 
PHILADELPHIA, PA. 19105

An Equal Opportunity Employer M/F.

Ph.D. RESEARCH SCIENTIST CENTRAL NERVOUS SYSTEM PHARMACOLOGY

As a result of the recent merger of American Home Products Corporation's two pharmaceutical divisions, Wyeth Laboratories and Ayerst Laboratories, we are now one of the largest pharmaceutical companies in the world. We currently have an opening for a Ph.D. Scientist in the CNS Department of our expanding Princeton, NJ research facility.

Specific responsibilities will include the establishment of *in vitro* neurophysiological-electrophysiological models to study the molecular mechanisms of drug action on the central nervous system. A Ph.D. in physiology/pharmacology is required. Postdoctoral experience with a strong understanding of the pharmacology of psychotherapeutic drugs supported by well-developed written and oral communication skills are essential.

We offer an excellent salary and benefits package plus opportunities for career advancement along with an ultra-modern research facility. Interested candidates please send resume to:

PERSONNEL MANAGER, DEPT. TH

 **WYETH-AYERST
RESEARCH**
CN 8000

Princeton, NJ 08543-8000

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POSITIONS OPEN

POSTDOCTORAL POSITIONS available to study hormonal regulation of breast cancer growth. Applicants should have an advanced degree (Ph.D. or M.D.), preferably with previous research experience in cell culture, radioimmunoassays, radioreceptor assays, growth factors and nude mouse work. Send curriculum vitae with names and addresses of three references to: **Dr. Andrea Manni, The Milton S. Hershey Medical Center/The Pennsylvania State University, Hershey, PA 17033. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE: Position available in Biochemistry Department, University of Maryland Dental School. Ph.D. in biochemistry required, with interest in molecular biology. Experience in one of the following areas desirable: protein biochemistry, especially membrane receptors; enzymology; and molecular biology. Salary commensurate with experience. Submit curriculum vitae with three references to: **Professor Y. F. Chang, 666 West Baltimore Street, Baltimore, MD 21201.**

POSTDOCTORAL RESEARCH ASSOCIATE position is available to work in pulmonary research laboratory situated in medical school. A Ph.D. (or equivalent) in bioengineering, physiology or related area with some background in cardiopulmonary or exercise physiology. Salary \$22,000 per year minimum depending on experience. Submit curriculum vitae and names of three references by 31 May 1988 to: **Dr. C. S. Poon, Department of Electrical Engineering, North Dakota State University, Fargo, ND 58105. An Equal Opportunity Institution.**

POSTDOCTORAL RESEARCH ASSOCIATE positions to begin September 1988 and renewable for 2 years, to study the mechanism of action of tumor necrosis factor. Applicants must have a Ph.D. and experience in cell biology, biochemistry or molecular biology. Minimum salary \$20,000. Send curriculum vitae, reprints of publications, and names of three references to: **Dr. Corrado Baglioni, Department of Biological Sciences, State University of New York at Albany, Albany, NY 12222. Affirmative Action/Equal Opportunity Employer. Applications from women, minority persons, handicapped persons and special disabled or Vietnam era veterans are especially welcome.**

POSTDOCTORAL RESEARCH ASSOCIATE BIOMEDICAL ENGINEERING LABORATORY RICE UNIVERSITY

There is a postdoctoral research position open in the Biomedical Engineering Laboratory of Rice University. The Biomedical Engineering Laboratory is a well-established research facility for the purpose of promoting interdisciplinary research involving personnel of Rice University and those of the Texas Medical Center. The laboratory has excellent equipment—including a variety of modern bioreological equipment—and has an experienced staff in addition to a number of predoctoral students and postdoctoral research associates.

Candidates should have training in engineering, biophysics, physiology, or related fields and have an interest in the microcirculation. The opening is in an established research program on oxygen transport in the microcirculation. The research involves use of an in vitro artificial capillary system for studying oxygen transport processes under controlled, measured conditions.

The stipend will be \$20,000 to \$25,000 annually, depending on qualifications. *Rice University is an Affirmative-Action/Equal-Opportunity Employer.*

Interested parties should write or call:

J. D. Hellums
Dean of Engineering
Rice University
P.O. Box 1892
Houston, TX 77251
Telephone: 713-527-4009

POSTDOCTORAL/RESEARCH ASSOCIATE—molecular genetics/gene expression studies in chloride transport related to cystic fibrosis; growth factor receptor expression in pediatric leukemia. Prior RNA experience required. **Peter E. Barker, Ph.D., 317 Sparks Center, Laboratory of Medical Genetics, University of Alabama at Birmingham, Birmingham, AL 35294.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

Available immediately, a position to carry out biochemical and immunological studies of liver fibrosis. Candidate must have Ph.D. in related field (preferably biochemistry); experience in recombinant DNA methods favored. Send curriculum vitae and three reference names to: **Dr. David Wyler, New England Medical Center Hospitals, 750 Washington Street, Box 041, Boston, MA 02111.**

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATES

Postdoctoral associate positions available immediately. Research is on differential gene repair of helix-stabilizing (antitumor antibiotics, anthracycline and CC-1065) and destabilizing (BPDE and NAAAF) DNA damage by using purified UVRABC proteins, and DNA hybridization method. The project involves protein purification and DNA sequencing. Send curriculum vitae and names of references to: **Dr. Moon-Shong Tang, University of Texas System Cancer Center, Science Park, P.O. Box 389, Smithville, TX 78957. An Equal Opportunity/Affirmative Action Employer. Targeting for a Non-Smoking Workplace.**

UNIVERSITY OF CALIFORNIA, IRVINE POSTDOCTORAL RESEARCH IN PSYCHOBIOLOGY

The Department of Psychobiology, University of California, Irvine (UCI), anticipates filling several postdoctoral research positions in the laboratories of the faculty with starting dates between 1 December 1988 and 30 April 1989. The current faculty and their research interests are: **D. Aswad** (neurochemistry); **M. Baudry** (cell biology and neurochemistry); **D. Cotman** (synaptic growth and plasticity); **R. Josephson** (comparative physiology of muscles); **M.-L. Kean** (linguistics and neural mechanisms of language processing); **H. Killackey** (developmental neuroanatomy); **M. Leon** (neurobiology of early learning); **G. Lynch** (physiology, neurochemistry); **J. Marshall** (neural plasticity of catecholamines); **J. McGaugh** (memory, storage processes); **R. Miledi** (synaptic physiology and molecular neurobiology); **M. Nieto-Sampedro** (cell neurobiology and neurochemistry); **I. Parker** (synaptic physiology); **D. Perkel** (theoretical neurobiology); **A. Starr** (cognition, sensation and evoked potentials); **K. Sumikawa** (molecular neurobiology); **N. Weinberger** (neural mechanisms of learning); and **P. Yahr** (neuroendocrinology and behavior).

Candidates should address inquiries to: **Postdoctoral Research Advisor, Department of Psychobiology, University of California, Irvine, CA 92717.**

*University of California, Irvine
An Equal Opportunity/Affirmative Action Employer*

POSTDOCTORAL RESEARCH POSITION

A position is available to study enzyme structure/function relationships utilizing physical biochemistry, NMR spectroscopy, and/or molecular biology. We are dissecting the structure of ligands (e.g., reaction intermediates) bound at enzyme active sites. Applicants should send curriculum vitae and the names and addresses of three references to: **Dr. Eileen K. Jaffe, Department of Biochemistry, University of Pennsylvania School of Dental Medicine, 4001 Spruce Street, Philadelphia, PA 19104-6002.**

POSTGRADUATE AND FACULTY RESEARCH PROGRAM at the Agency for Toxic Substances and Disease Registry—ATSDR is a new agency of the Public Health Service based in Atlanta created to implement health-related sections of laws that protect the public from hazardous wastes or environmental spills of hazardous substances. Immediate openings are available for those with experience in toxicology, epidemiology, health education, and related areas. U.S. citizenship or PRA status is required. For more information and applications contact (please indicate if faculty or postgraduate): **Research Participation Program/ATSDR, University Programs Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117. Telephone: 615-576-3190.**

POSITIONS OPEN

POSTGRADUATE RESEARCH ASSOCIATE, cell biologist/biochemist sought to study mammalian cell culture, cell transformation, growth factors and their activation, steroid hormone regulation of cell proliferation, and gene expression. Ph.D. required. Starting salary is \$23,000 to \$25,000. Position is available immediately but starting date is flexible. Send curriculum vitae and name of three references to: **Dr. Jonathan J. Li, Department of Urologic Surgery, Box 394 Mayo, University of Minnesota Hospital and Clinic, Minneapolis, MN 55455. The University of Minnesota is an Equal Opportunity Employer and Educator and specifically invites and encourages applications from women and minorities.**

PROFESSOR OF GEOPHYSICS—The Department of the Scripps Institution of Oceanography at the University of California, San Diego (UCSD), is accepting applications for assistant, associate, or full professorial positions (tenure-track/tenured) in order to lead a program in geodynamics or earthquake seismology. Candidates must possess a Ph.D. degree, or be advanced to candidacy, in geophysics or another branch of the earth sciences. Successful candidates should have a broad range of expertise including one or more of the following: plate tectonics, seismology, the study of crustal and lithosphere deformation using satellite methods, the geoid, and the gravity field of the earth. An interest in seagoing experimentation will be considered an advantage. The position(s) will involve graduate and undergraduate teaching and the supervision of graduate student research. Associate or full professorial level candidates must show evidence of a strong research record in their specialization; assistant level candidates will be expected to show evidence of their potential through a publication record appropriate for their experience and letters of recommendation. The appointment(s) is planned to begin 1 January 1989, and the rank/level and salary will be commensurate with qualifications and experience based on UC pay scale. Applications (including names of five persons who can be contacted as references and résumé of teaching experience) should be submitted to: **Chairman-G, Department of the Scripps Institution of Oceanography, A-008, UCSD, La Jolla, CA 92093.** Applications received after 1 July 1988 may not be considered. *An Equal Opportunity/Affirmative Action Employer.*

PROFESSOR OF INTERNAL MEDICINE. A tenure-track position to develop original research projects in the biophysics of cardiac electric fields in cooperation with other scientists at the same and other institutions in the U.S. and abroad. Teaching the same topics to graduate and medical students is also required. Candidates must have a Ph.D. in physiology, or equivalent experience for such a degree, knowledge of medicine, and a minimum of 10 years of postdoctoral experience. Closing date for the position is 15 June 1988 or until a qualified candidate has been identified. Send résumé and references to: **Dr. J. A. Abildskov, University of Utah, CVRTI, Building 100, Salt Lake City, UT 84112. An Equal Employment Opportunity/Affirmative Action Employer.**

UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE DIVISION OF IMMUNOLOGY DEPARTMENT OF PATHOLOGY AND LABORATORY MEDICINE

The Department of Pathology and Laboratory Medicine has openings for **RESEARCH ASSISTANT PROFESSORS** in the area of receptor immunology. The individuals must possess an M.D. and/or Ph.D. degree and may be Board-certified.

Candidates must have demonstrated academic research skills and service qualifications, and have generated or possess the ability to generate external funding for their research. Salary will be commensurate with experience and qualifications. *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

Inquiries and curriculum vitae with names of three referees should be sent to:

Mark Greene, M.D., Ph.D.
Director
Division of Immunology
Department of Pathology and Laboratory Medicine
University of Pennsylvania
John Morgan Building
Philadelphia, PA 19104-6082



**Agricultural
Research
Service**

**United States
Department of
Agriculture**

The AGRICULTURAL RESEARCH SERVICE is seeking innovative scientists for challenging positions in biochemistry and biophysics research at the Northern Regional Research Center, Peoria, IL. Two positions are available immediately as part of an expanding team investigating microbial and enzymatic interactions with carbohydrate polymers:

ENZYMOLOGIST – develop enzyme systems with altered substrate and /or product specificities. (Position No. 1W2561); and

BIOCHEMIST/BIOPHYSICIST – study microbial metabolism using state of the art spectroscopic techniques such as FTIR, photoacoustic spectroscopy and NMR. (Position No. 1W6065).

Positions are Research Associates with initial appointments of 2 years. Recent PhD (or equivalent) required. Salary \$27,716 – \$33,218 (GS-11/12). The Northern Regional Research Center is a well-equipped, major research facility with more than 350 scientists and staff. For additional information, contact **J. Michael Gould, USDA/ARS/NRRC, 1815 N. University St., Peoria, Illinois 61604**. Applications should be sent to Helen Sweeney, Personnel Assistant, at the same address (telephone: 309/685-4011). Applications in response to this ad should be marked **BN018**. Please indicate the position for which you are applying.

USDA is an Equal Opportunity Employer

RESEARCH ASSOCIATE CARDIOVASCULAR PHARMACY

The Squibb Institute for Medical Research is recognized internationally as a leader in the research and development of novel therapeutic agents for the treatment of cardiovascular and infectious diseases. We currently have an exceptional opportunity for an experienced research scientist to join our Pharmacology Department.

You will be responsible for conducting *in vivo* and *in vitro* experiments related to myocardial ischemia and cardiovascular pharmacology. You will also perform large and small animal surgery with emphasis on thoracic work, data analysis and report writing as required.

Qualified candidates should have a BS (MS preferred) in Biology and a minimum of 2 years related research experience.

In addition to an excellent starting salary and comprehensive benefits package, we can offer the opportunity to pursue a stimulating and rewarding career. For confidential consideration, please submit your resume to: **The Squibb Institute for Medical Research, Human Resources Department 729, P.O. Box 4000, Princeton, NJ 08543-4000**. An equal opportunity employer.



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Research

Assistant/Associate Director of Clinical Research

Immunex Corporation, a Seattle-based biotechnology corporation in the forefront of research and development in immune regulation, currently has an immediate opportunity for an Assistant/Associate Director of Clinical Research.

The primary responsibilities for this position will include managing and interpreting clinical trials for FDA submission, overseeing data collection activities; monitoring medical questions; and interaction with research and development, manufacturing, regulatory affairs, and physician investigators.

The qualified applicant will have a PhD or MD and 2-5 years of clinical research experience. Experience with biologics is advantageous.

Immunex offers a challenging and rewarding work environment, as well as an excellent compensation and benefits package. For consideration, please submit resume together with the names of three references to: **Immunex Corporation, Human Resources Director, Dept. SCI, 51 University Street, Seattle, WA 98101**. EOE.

IMMUNEX

POSITIONS OPEN

RESEARCH ASSISTANT PROFESSOR

Applications are invited from candidates interested in joining an interdisciplinary research group investigating various aspects of mitochondrial biology. Research focus will be on (i) the control of mitochondrial movement in cells, and (ii) the diffusion and collisional interactions of inner membrane proteins related to electron transport and ATP-synthesis. Methodological approaches include membrane and cytoskeletal biochemistry, fluorescence recovery after photobleaching, resonance energy transfer, fluorescence UV/VIS spectroscopies, nanometer particle video microscopy, multiparameter digitized video microscopy, and freeze fracture electron microscopy. Support technicians and computer facilities provided. Salary competitive with research faculty levels. Ph.D. and good record of research publications required. Send applications, including curriculum vitae and the names of three references to: **Dr. C. R. Hackenbrock, Laboratories for Cell Biology, Department of Cell Biology and Anatomy, University of North Carolina at Chapel Hill, School of Medicine, CB#7090, 108 Swing Building, Chapel Hill, NC 27599-7090** by 30 June 1988. *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE

Full-time position to work on the physiology and ultrastructure of synaptic transmission. The project involves freeze-fracture and serial thin section studies of identified synapses. The research associate will have input into the course of the studies and should have expertise in ultrastructural techniques and an understanding of electrophysiology. A B.S. degree is required, an M.S. degree is preferred. Salary is commensurate with education and experience. Application deadline: 15 July 1988. Send curriculum vitae and three references to: **Eileen Banks, Department of Anatomy and Neurobiology, Colorado State University (CSU), Fort Collins, CO 80523.** *CSU is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE position available immediately to study brainstem control of breathing. Ph.D. and experience in mammalian CNS extracellular recording required. Studies will use advanced multi-neuron recording and computational laboratories to analyze neural network dynamics. Salary range: \$18,000 to \$22,500. Application deadline: 1 July 1988. Send curriculum vitae and three letters of reference to: **Dr. Bruce G. Lindsey, Department of Physiology and Biophysics, University of South Florida Medical Center, Tampa, FL 33612.** *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE—for studies of synthesis, packaging and membrane expression of complement receptor/adherence proteins in human neutrophils and myeloid cell lines. Experience with immunoassays, monoclonal antibodies and/or cell fractionation and membrane protein biochemistry techniques desirable. Salary/benefits dependent on qualifications. Send curriculum vitae and references to:

Melvin Berger, M.D., Ph.D.
Division of Immunology
Department of Pediatrics
Case Western Reserve University
2109 Adelbert Road
Cleveland, OH 44106

Case Western Reserve University is an Equal Opportunity/Affirmative Action Employer.

RESEARCH POSITION IN MATHEMATICAL PHYSICS

A position as postdoctoral fellow in mathematical physics at an annual salary of \$24,000 will be available at Harvard University starting 1 September 1988. The position is for 3 years, with the possibility of renewal or promotion. Special fields of interest include constructive field theory, geometry and field theory or string theory, or related statistical mechanics problems. It is expected that the applicant have significant experience in applying methods of constructive field theory to supersymmetric quantum field theories and to related questions of geometry in infinite dimensional spaces. Applications and references should be sent to:

Professor Arthur Jaffe
Lyman Laboratory
Harvard University
Cambridge, MA 02138

Laboratory Animal Clinical Veterinarian

Pfizer Central Research is seeking a veterinarian to provide veterinary medical services and expertise in laboratory animal science to support its Research Animal Resources Section.

This position provides the opportunity to expand the scope and delivery of basic veterinary services to the Division in areas such as direct veterinary care of research animals, animal health surveillance programs and the development and implementation of standard operating procedures.

Your duties will include providing advice and assistance to research scientists, participation in maintaining a veterinary surgical service and implementing contemporary methods and procedures for management of research animal colonies. You will participate in ensuring compliance with federal, state and local statutes and internal procedures and standards.

You must have a minimum of three years practical experience in clinical laboratory animal medicine and/or two years of formal postdoctoral training. It is desirable that you be an ACLAM diplomate or be eligible to sit for that board examination and that you have expertise in veterinary ophthalmology.

This position offers a stimulating professional environment in an attractive Connecticut shore area, complemented by a competitive salary/benefits package and relocation assistance. Forward your resume, description of research accomplishments and references to: **Jerry K. Larson, Ph.D., Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.**



An equal opportunity employer

Research Scientist Molecular Biology

Triton Biosciences Inc., a subsidiary of Shell Oil Company, is a fully integrated pharmaceutical and diagnostics company focused on product development opportunities in the area of cancer and other life-threatening diseases.

An excellent opportunity exists for an innovative researcher within the Molecular & Cell Biology Department. Applicants should have a Ph.D. in Microbiology, Molecular Biology or Biochemical Engineering, plus a strong background in microbial genetics and/or microbial physiology and 2-3 years postdoctoral or industry experience.

The successful candidate will work closely with several rDNA laboratories to design, test, and scale-up different host/vector systems and fermentation protocols to facilitate industrial production of cancer therapeutic and diagnostic reagents. Experience with state-of-the-art fermentation equipment would be an asset.

Triton is located in the San Francisco Bay Area and offers competitive salaries and benefits including relocation assistance. For consideration, send C.V. with salary history and references to: **Triton Biosciences Inc., Box JB-S, 1501 Harbor Bay Parkway, Alameda, CA 94501.** *An Equal Opportunity Employer.*



Triton Biosciences Inc.

CLINICAL RESEARCH

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ICI Pharmaceuticals Group, which includes Stuart Pharmaceuticals and ICI Pharma, is one of the nation's fastest growing pharmaceutical companies. During the past decade, we have tripled our sales, increased our product lines, and continued to develop new drugs in our expanding research facility. To keep pace with this growth, we need clinical research professionals with proven experience for the following career positions:

- **CLINICAL RESEARCH ASSOCIATE-BS** in Bioscience or Nursing, plus experience in clinical research. Must be available for travel.

- **CLINICAL DATA ANALYST-BS** in Bioscience, experience in clinical data analysis and computer operations, SAS knowledge a plus.

We offer highly competitive salaries, comprehensive benefits including a unique investment plan and the opportunity for future professional and financial growth. Send resume and salary requirements in confidence to: **J.C. Gearhart, ICI Pharmaceuticals Group, Wilmington, DE 19897.** An Equal Opportunity Employer, M/F.



ICI Pharmaceuticals Group

UNIVERSITY OF HAWAII BIOTECHNOLOGY PROGRAM

The Biotechnology Program at the University of Hawaii at Manoa is selectively expanding existing research in tropical/subtropical biology. Two areas selected for immediate expansion are symbiotic nitrogen fixation by tropical rhizobia and solar energy conversion by prokaryotes, using molecular and immunological approaches.

The Biotechnology Program, which is a joint activity of the Pacific Biomedical Research Center (PBRC) and the Hawaii Institute of Tropical Agriculture and Human Resources (HITAHR), coordinates campus-wide biotechnology research in agriculture and biomedicine. The University of Hawaii at Manoa has a wide range of basic biology departments and professional schools. The Biotechnology Program operates a molecular biology core facility which provides services in protein sequencing, peptide and oligonucleotide synthesis, and has extensive hardware and software for computer assisted constructions and data analysis.

1. **Assistant/Associate Researcher, HITAHR.** A tenure-track position is available in the area of molecular genetics of tropical rhizobia. At the Assistant Researcher level candidates should have a Ph.D. in molecular biology, microbiology, or related discipline with postdoctoral experience in rhizobial genetics or a related area. At the Associate Researcher level candidates should also have a demonstrated record of extramural funding. HITAHR offers unique opportunities for collaboration in tropical rhizobia through its major existing program (NifTAL) in tropical symbiotic nitrogen fixation. The successful candidate will be expected to establish a major program in the subject and will hold an academic appointment in an appropriate department of the College of Tropical Agriculture and Human Resources.

2. **Assistant/Associate Researcher, PBRC.** A tenure-track position is available in the area of the molecular genetics of solar energy conversion, particularly hydrogen evolution. At the Assistant Researcher level candidates should have a Ph.D. in molecular biology, microbiology or a related discipline and postdoctoral experience in an area related to the molecular genetics of solar energy conversion in prokaryotes. At the Associate Researcher level candidates should also have a demonstrated record of extramural funding. The Chemistry Department of the University has a major program in the natural products chemistry of cyanobacteria, which offers an excellent opportunity for collaboration. The successful candidate will have an academic appointment in an appropriate department.

3. **Assistant Researcher, PBRC.** A state-funded, presently non-tenured, position to develop an independent program in molecular genetics of bacteria is available. A Ph.D. in microbiology or molecular biology with postdoctoral experience in molecular genetics of bacteria is required.

Salary and rank dependent on qualifications and experience. Earliest starting date July 1, 1988, or as soon thereafter as suitable candidates are found. Please send applications and names of three referees to:

SURESH S. PATIL, Director
Biotechnology Program
University of Hawaii
3050 Maile Way, Rm. 410
Honolulu, HI 96822

EEQ/AA



NEUROPHARMACOLOGIST/ NEUROCHEMIST

Nova Pharmaceutical Corporation, a leading research and development company in Baltimore, is inviting applications for a scientist with expertise in neuropharmacology to participate in a unique drug discovery program. The successful candidate must possess a Ph.D. and 0 to 2 years of postdoctoral experience. Individuals with training in pharmacology, biochemistry, or neuroscience are encouraged to apply. Those applicants, however, with a demonstrated understanding of ligand receptor binding and second messenger systems are preferred. The position will require supervision of a small group of technical associates, plus excellent written and oral communication skills.

Nova Pharmaceutical Corporation is an Equal Opportunity Employer, offering a very competitive compensation and benefits package and a challenging work environment. Interested individuals should forward their resume, along with a cover letter detailing specific interests and three references to: **L. Faris - RA/PK, Nova Pharmaceutical Corporation, 6200 Freeport Centre, Baltimore, Maryland 21224-2788.**

ASSOCIATE DIRECTOR PATENT, TRADEMARK & COPYRIGHT OFFICE (PTCO)

The PTCO administers the patent program for a major multi-campus western research university system. Services provided include prosecution and licensing of inventions, financial management of resulting income, and policy guidance and information on a broad range of intellectual property issues. The office consists of 25 individuals, roughly half of whom hold professional or management appointments.

This newly created position will serve as the Internal Operating Officer, under the guidance of the Director. He/she will have day-to-day management responsibilities in all functional areas including plant and utility inventions, receipt to disposition; ongoing fiscal/technical management of agreements; sponsor relations and general assistance to campuses and organizational units, re: intellectual property issues; staffing, budget and administrative support; and policy formulation/implementation as requested by the Director.

Requirements: Bachelor's degree in a physical science, biological science or engineering and 8 years experience in management of a technology assessment/development function in a large, complex university or private sector environment. Must be a U.S. citizen and registered with the U.S. Patent Office.

Candidates must have strong organizational/administrative skills, with ability to manage smooth/efficient operations while processing substantial and varied work loads. Mature judgement, strong interpersonal skills, and ability to exercise constraint in dealing with internal and external issues is also required, plus the ability to function effectively in a complex organization structure.

The individual should be decisive, able to take risks, and experienced enough to quickly gain respect of staff and industry. He/she must have a thorough understanding of patent and licensing law; familiarity with newer technologies would be helpful. Starting salary up to \$70,000 commensurate with experience.

To apply, please send resume and salary history to: #100 Shoreline Hwy., P.O. Box 2126, Sausalito, CA 94966. We are an equal opportunity employer.

POSITIONS OPEN

Beecham Laboratories, a leading manufacturer of veterinary biologicals, has openings for innovative **RESEARCH MICROBIOLOGISTS** in the fields of virology and bacteriology. Experience in vaccine development preferred. 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.**

The German Primate Center (Deutsches Primatenzentrum—DPZ) is a government-supported research institute conducting scientific and biomedical research on and with primates.

The Division for Virology and Immunology has a vacancy for a **RESEARCH SCIENTIST, BÄT Ib/Ia**, specialized in **VIROLOGY-IMMUNOLOGY**, possibly with experience in molecular biology.

Research in this division focuses on primate retroviruses, AIDS-research is the eminent topic. At the moment, the establishment of an animal model for the development of HIV vaccines and AIDS-therapeutics is our most important goal.

In this context our new co-worker should have a strong and relevant scientific background enabling him/her to develop and conduct new research projects and to coordinate and join in other ongoing projects in the division. He/she should be able to act for the head of division during absences, secure additional research grants and cooperate with other groups in Germany and abroad. For a BÄT Ia contract, habilitation or equivalent scientific experience and a convincing research program would be prerequisite. Initially the contract will be of limited duration. Employment at the DPZ follows the rules of German public service.

Please send full curriculum vitae, description of scientific achievements, and list of publications to the DPZ administration: **Deutsches Primatenzentrum GmbH, Kellnerweg 4, 3400 Göttingen, Germany**, within 6 weeks from the publication of this notice. **Telefax acceptable: 0551-3851-228.**

RESEARCH SPECIALIST—Participates in and directs research and product development projects; applies statistical tests and/or mathematical analyses in testing models to insure adequacy or determine need for reformulation; provides quantitative/analytic support for development of mathematical pricing and hedging models in such areas as options, swaps, and foreign exchange; produces prototype computer models and supports development of related production systems; analyzes problems in management information and develops a competitive computer system that affords maximum profits and minimum risk. Requires: Ph.D. in mathematics; minimum of 5 years of experience in applied mathematics in business or economics; at least 5 years of computer programming experience involving financial, analytical, or economic applications, experience with high-level languages such as LOTUS and DBASE III, and ability to implement model and development system prototypes; and demonstrated mathematical and statistical analytic and modeling skills. Job site: San Francisco, CA; 40 hours per week; \$55,000 per year. Send this advertisement and résumé to: **Job #DN 2717, P.O. Box 9560, Sacramento, CA 95823-0560** not later than 28 May 1988. *Equal Opportunity Employer.*

UNIVERSITY OF HONG KONG SCIENTIFIC OFFICER

Applications are invited for a newly established post of Scientific Officer in the Clinical Biochemistry Unit, Hospital Pathology Services of the University. Applicants should have university degrees in medical laboratory subjects or in related subjects with an appropriate content of biochemistry. Preference will be given to candidates who have higher degrees or further professional qualifications, and relevant experience.

Annual salary (superannuable) is on an 11-point scale: HK\$188,000 to HK\$314,340 (US\$1 = HK\$7.80 equivalent as at 21 March 1988). Starting salary will depend on qualifications and experience. At current rates, salaries tax will not exceed 16.5% of gross income. Children's education allowances, leave, and medical benefits are provided; housing or tenancy allowances are also provided in most cases at a charge of 7.5% of salary.

Further particulars and application forms may be obtained from: **The Association of Commonwealth Universities (Appts)**, 36 Gordon Square, London WC1H 0PF, or from: **The Appointments Unit, Registry, University of Hong Kong, Hong Kong.** Closes 30 June 1988.

POSITIONS OPEN

RESEARCH TECHNICIAN with experience in recombinant DNA techniques. Applicant will be involved in molecular cloning of genes encoding neuronal cell surface proteins and should be familiar with methods of nucleic acid hybridization, and cDNA library screening. Send curriculum vitae and references to: **T. Jessell, Howard Hughes Medical Institute, 722 West 168th Street, Research Annex, New York, NY 10032.**

SCIENTISTS— BIOMEDICAL RESEARCH

Two staff scientist positions exist in the Department of Toxicology at the U.S. Army Medical Research Institute for Infectious Diseases. These openings are Federal civil service positions in an established research group studying protein toxins. *Applicants must be U.S. citizens.*

GS-12: \$33,218 through \$43,181 per annum. **IMMUNOLOGIST**—Expertise and interest in the development of new and novel vaccines against protein toxins.

GS-13: \$39,501 through \$51,354 per annum. **MOLECULAR GENETICIST**—Expertise and interest in the generation and expression of cloned proteins for possible use as vaccines or basic research studies.

The Institute, which has excellent facilities, is a leading medical research facility engaged in the development of drugs and vaccines against militarily important diseases. All research is unclassified and publication is encouraged. The Institute is located in Frederick, Maryland in a semi-rural setting, with ready access to the metropolitan areas of Washington, D.C. and Baltimore, Maryland.

Application procedures: For specific job information, application forms and procedures, contact: **Mr. Raymond J. Mangold, Civilian Personnel Office, Fort Detrick, Frederick, MD 21701-5000. Telephone: 301-663-2314/2834. Equal Opportunity Employer.**

UNIVERSITY OF MARYLAND DEPARTMENT OF PHYSICS AND ASTRONOMY CENTER FOR SUPERCONDUCTIVITY RESEARCH

The new State-funded Center for Superconductivity Research seeks candidates to fill the following positions in the general area of **SUPERCONDUCTIVITY**: (i) **FULL PROFESSOR** in experimental condensed matter physics. Preference will be given to candidates in the general area of Materials Physics. (ii) **ASSISTANT PROFESSOR** in experimental condensed matter physics. (iii) **RESEARCH SCIENTISTS**, with particular expertise in materials growth. (iv) **POSTDOCTORAL FELLOWSHIPS**. (v) **GRADUATE STUDENT FELLOWSHIPS**. *Women and minority candidates are strongly encouraged to apply.* Candidates should send a complete curriculum vitae and the names of three references to: **Professor Jeffrey Lynn, Department of Physics, University of Maryland, College Park, MD 20742. The University of Maryland is an Equal Opportunity/Affirmative Action Employer.**

TECTONICS/SCRIPPS INSTITUTION OF OCEANOGRAPHY

Applications are invited for one or more **TENURED OR TENURE-TRACK FACULTY POSITIONS** in tectonics. Applicants must hold the Ph.D. degree, or be advanced to candidacy, and will be expected to conduct a vigorous research program in the general field of tectonics. Areas of interest are not restricted to but include such diverse subjects as kinematic reconstructions, lithospheric deformation, processes at plate boundaries and rock mechanics. Ocean-related experience and/or interests, while not a condition of candidacy, will be considered in the selection process. Teaching and supervision of graduate research will be an integral part of the responsibilities of the successful candidate. The level of appointment and salary will be commensurate with the qualifications and experience based on University of California pay scale. Associate or full professorial level candidates must show evidence of a strong research record; assistant level candidates will be expected to show evidence of their potential through a publication record appropriate for their experience and letters of recommendation. Send letter of application including a description of research interests, list of publications, statement of teaching interests and experience and names of at least five references to: **Chair (TEC), Graduate Department, A-008, Scripps Institution of Oceanography, University of California, San Diego, La Jolla, CA 92093.** Closing date for applications is 1 July 1988. *UCSD is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

UROLOGY FACULTY POSITION

The Department of Urology, Tulane University School of Medicine in New Orleans is seeking an individual with research interests in reproductive biology. The candidate should have training in all aspects of clinical andrology (computerized semen analysis, immunologic studies and hormonal assays). A Ph.D. scientist is needed with an interest in reproductive biology and immunology. The candidate should be prepared to participate in resident teaching, assist in research projects, and should be capable of interdigitating research efforts with clinical faculty, as well as working independently on related basic projects.

Send curriculum vitae and bibliography to:

**Wayne J. G. Hellstrom, M.D.
Department of Urology
Tulane University School of Medicine
1430 Tulane Avenue
New Orleans, LA 70112
An Equal Opportunity Employer**

CONFERENCES

MOLECULAR BIOLOGY AND PATHOLOGY Copper Mountain, Colorado 24 to 29 July 1988

Teaching and research conference on advanced techniques and recent progress on the molecular basis of cystic fibrosis, lymphomas, leukemias, hereditary neurologic disorders, and the pathogenesis of HIV, and other viral, bacterial, and parasitic agents. Participant fee (\$585) includes housing, meals, course materials, and monograph. Adult guests (\$260) may accompany participants. Registration, CME, program, and air travel discount information available from: **M. Marsh, Conference Coordinator, 9650 Rockville Pike, Bethesda, MD 20814. Telephone: 301-530-7093.**

PROGRAM

CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain a doctor of optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: **Ph.D.-O.D. Program Director, Admissions Office, The New England College of Optometry, Room 14, 424 Beacon Street, Boston, MA 02115.**

SYMPOSIUM

FIFTH INTERNATIONAL SYMPOSIUM ON THE IMMUNOBIOLOGY OF PROTEINS AND PEPTIDES VACCINES

**MECHANISM, DESIGN, AND
APPLICATIONS
2 to 5 October 1988
Chateau Lake Louise
Alberta, Canada**

For information: **Dr. M. Z. Atassi, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP position available in July 1988 for research in the structure and function of human glycoprotein hormones (human choriotropin, lutropin, and follitropin). Applicant must have doctoral degree and experience in protein purification and ligand binding assays. Experience in HPLC, peptide synthesis and sequencing, amino acid analysis and preparation of antibodies to synthetic peptides is desirable, but not necessary. Applicants should submit a letter describing their research interests, curriculum vitae, and at least two letters of recommendation to: **Drs. R. Ryan/J. McCormick, Department of Biochemistry and Molecular Biology, Mayo Medical School, 200 1st Street Southwest, Rochester, MN 55905.** Deadline 15 June 1988. *An Equal Opportunity/Affirmative Action Institution.*

ANNOUNCING

FIRST ANNUAL BRISTOL-MYERS AWARD FOR DISTINGUISHED ACHIEVEMENT IN NEUROSCIENCE RESEARCH

Bristol-Myers Company presents an annual award to a scientist making an outstanding contribution in neuroscience research. Candidates for the award are to be nominated by medical schools, hospitals and neuroscience research centers.

AWARD: \$50,000 U.S.

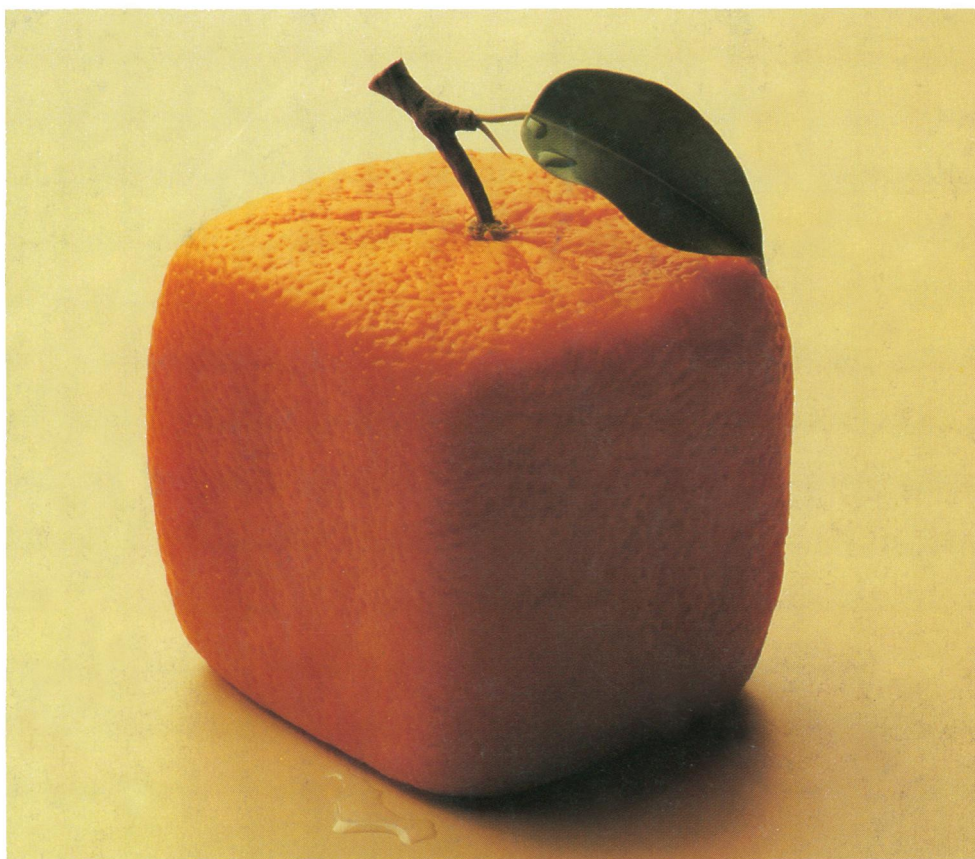
Deadline for Receipt of Nominations: June 15, 1988

Announcement of Award Recipient: Fall 1988

SELECTION COMMITTEE

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Rules and official nomination forms are available from: Secretary, Award Committee
Bristol-Myers Award for Distinguished Achievement in Neuroscience Research
345 Park Avenue, 43-72, New York, New York 10154.



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The AminoQuant amino acid analyzer only takes 1 μ l of hydrolysate to precisely quantitate primary and secondary amino acids of most importance to you—even down to the sub-picomole level!

In addition to its remarkable resolution and precision, the AminoQuant analyzer makes the process faster and simpler by fully automating derivatization, sample injection, analysis and reporting.

Detailed research and rigorous customer site testing allow us to warrant an exceptional set of performance specifications. And it's not just a promise. At installation, we verify that your system, in fact, meets that set of specifications. The specially designed reagents, column and necessary methodology are all provided with the AminoQuant analyzer.

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