

"cookbook" or a user's guide to techniques of quantitative correlation.

In the book several fundamental issues are addressed such as numerical matching of rocks as opposed to correlating formal stratigraphic units. Also the possible lateral and vertical relationships between lithologic units and how these relationships can be entered into a database are briefly discussed. L. E. Edwards provides an excellent overview of quantitative biostratigraphy as categorized into four concepts: tally (presence), event (highest and lowest), morphology (species morphology), and ecostratigraphy (abundance of particular taxa). Edwards notes that most multivariate, seriation, and relational strategies implicitly are concerned with the stratigraphic event concept. However, in seriation, the matrix in which species and samples are compared has the rows rearranged to minimize the ranges of species. Thus the occurrences, not the events, are emphasized. Seriation is discussed by J. C. Brower and W. A. Burroughs as a simple method of generating meaningful and informative range charts in which it is possible to group most similar samples. Edwards discusses the different techniques for depicting species ranges and how seriation produces ranges that are neither maximum nor average ranges. She notes that probabilistic and multivariate techniques produce average ranges.

Some other contributions in the book include discussions of the conceptual basis for lateral tracing of biostratigraphical units and of properties of composite sections constructed through least-squares fitting, a probabilistic model of foraminiferal stratigraphy, a time-series analysis based on species abundance to determine features of climatic fluctuations, and a paleoecological study using correspondence analysis. The papers generally appear to have been written for the mathematically knowledgeable stratigrapher. However, there is a considerable amount of information for those not well versed in such methods. Most of the papers document the methods and indicate the available computer programs that were used in doing the analyses. There are extensive lists of references to sources of further information on many of the subjects discussed. The techniques used are of importance to all stratigraphers. Certain of these methods allow a large quantity of data to be examined in a relatively short time. One of the most attractive features of such analyses is that they are extremely powerful in finding the major trends in the data. They automate what are otherwise

tedious manual tasks. Also they enable the researcher to summarize a large quantity of data objectively and to put them forth in an easily understood graphical format. One of the shortcomings of this book is that many of the figures are mathematically too technical in their labeling and captions. There should have been more general or user-friendly labeling to make the papers suited to the average stratigrapher and to show the amount of graphical information provided through such analyses. Many geologists have not used quantitative techniques because mathematical geologists and statisticians often do not communicate in plain language.

The principles of quantitative stratigraphic correlation take some dedication to learn but are essential because of the increasing quantity of data being accumulated about stratigraphic sequences and the amount of information being published using these techniques.

BLAKE W. BLACKWELDER
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Books Received

Anatomy of Reality. Merging of Intuition and Reason. Jonas Salk. Columbia University Press, New York, 1983. xxxii, 128 pp. \$16.95. Convergence.

Ancient North Americans. Jesse D. Jennings, Ed. Freeman, San Francisco, 1983. xiv, 642 pp., illus. \$24.95.

Animal Physiology. Mechanisms and Adaptations. Roger Eckert with chapters by David Randall. Freeman, San Francisco, ed. 2, 1983. xviii, 830 pp., illus. \$30.

Biotechnology in Industry. Selected Applications and Unit Operations. Rajani Joglekar, Robert J. Clerman, Robert P. Ouellette, and Paul N. Cheremisinoff. Ann Arbor Science (Butterworths), Woburn, Mass., 1983. xvi, 180 pp., illus. \$27.50.

A Bitter Fog. Herbicides and Human Rights. Carol Van Strum. Sierra Club Books, San Francisco, 1983. xii, 288 pp., illus. \$14.95.

Chemistry. Karen Timberlake. Harper and Row, New York, ed. 3, 1983. xviii, 558 pp., illus. \$26.50.

Chemistry and Technology of Water-Soluble Polymers. Papers from a school, Cambridge, England, Sept. 1981. C. A. Finch, Ed. Plenum, New York, 1983. xvi, 358 pp., illus. \$55.

The Design and Analysis of Sequential Clinical Trials. John Whitehead. Horwood, Chichester, England, and Halsted (Wiley), New York, 1983. 272 pp. \$69.96. Ellis Horwood Series in Mathematics and Its Applications.

Desorption Induced by Electronic Transitions DIET I. Proceedings of a workshop, Williamsburg, Va., May 1982. N. H. Tolk, M. M. Traum, J. C. Tully, and T. E. Madey, Eds. Springer-Verlag, New York, 1983. xii, 270 pp., illus. \$29.50. Springer Series in Chemical Physics, vol. 24.

The Endangered Species Handbook. Greta Nilsson with contributions by Michael Bean, James Buckley, Barry Groveman, and others. Animal Welfare Institute, Washington, D.C., 1983. xii, 246 pp., illus. Paper, \$5.

Fundamentals of Linear Algebra and Analytical Geometry. Ya. S. Bugrov and S. M. Nikolsky. Translated from the Russian edition (Moscow, 1980) by Leonid Levant. Mir, Moscow, 1982 (U.S. distributor, Imported Publications, Chicago). 194 pp., illus. Paper, \$3.45. Higher Mathematics.

Gauge Theory and Gravitation. Proceedings of a symposium, Nara, Japan, Aug. 1982. K. Kikkawa, N. Nakanishi, and H. Nariai, Eds. Springer-Verlag, New York, 1983. x, 316 pp. Paper, \$18. Lecture Notes in Physics, vol. 176.

Human and Environmental Risks of Chlorinated Dioxins and Related Compounds. Proceedings of a symposium, Arlington, Va., Oct. 1981. Richard E. Tucker, Alvin L. Young, and Allan P. Gray, Eds. Plenum, New York, 1983. xii, 824 pp., illus. \$95. Environmental Science Research, vol. 26.

Hyphomycetes. Taxonomy and Biology. C. V. Subramanian. Academic Press, New York, 1983. xiv, 502 pp., illus. \$65.

Illustrated Facts and Records Book of Animals. Theodore Rowland-Entwistle. Arco, New York, 1983. 236 pp. \$9.95.

In Pursuit of the Past. Decoding the Archaeological Record. Lewis R. Binford. Thames and Hudson, New York, 1983 (distributor, Norton, New York). 256 pp., illus. \$18.50.

Kitchen Science. A Compendium of Essential Information for Every Cook. Howard Hillman with Lisa Loring. Illustrations by Jill Kampmier. Houghton Mifflin, Boston, 1983. viii, 264 pp., illus. Paper, \$6.95. Reprint of the 1981 edition.

Land Surface Processes in Atmospheric General Circulation Models. Papers from a conference, Greenbelt, Md., Jan. 1981. P. S. Eagleson, Ed. Cambridge University Press, New York, 1983. x, 560 pp., illus. \$59.50.

Metal Ions in Biological Systems. Vol. 15, Zinc and Its Role in Biology and Nutrition. Helmut Sigel, Ed. Dekker, New York, 1983. xxiv, 494 pp., illus. \$75.

Methods and Issues in Occupational and Environmental Epidemiology. Leonard Chiazze, Jr., Frank E. Lundin, and Deborah Watkins, Eds. Ann Arbor Science (Butterworths), Woburn, Mass., 1983. xiv, 242 pp. \$39.95.

Metropolis and Province. Science in British Culture, 1780-1850. Ian Inkster and Jack Morrell, Eds. University of Pennsylvania Press, Philadelphia, 1983. 288 pp. \$30.

Nonconventional Energy Resources. Philip R. Pryde. Wiley, New York, and Winston, Silver Spring, Md., 1983. xviii, 270 pp., illus. \$19.95.

Nonlinear Programming. Theory, Algorithms, and Applications. Garth P. McCormick. Wiley-Interscience, New York, 1983. xx, 444 pp., illus. \$44.95.

North Sea Dynamics. Papers from a symposium, Hamburg, Aug. 1981. J. Sündermann and W. Lenz, Eds. Springer-Verlag, New York, 1983. xviii, 694 pp., illus. \$41.

Optical and Laser Remote Sensing. D. K. Killinger and A. Mooradian, Eds. Springer-Verlag, New York, 1983. x, 384 pp., illus. \$34. Springer Series in Optical Sciences, vol. 39.

Oral Sensory Mechanisms. Yojiro Kawamura, Ed. Karger, Basel, 1983. x, 130 pp., illus. \$58.75. Frontiers of Oral Physiology, vol. 4.

Organic Synthesis with Carbon-14. Richard R. Muccino. Wiley-Interscience, New York, 1983. xii, 676 pp., illus. \$52.50.

Passive Solar. Subdivisions, Windows, Underground. Herb Wade, Jeffrey Cook, Ken Labs, and Steve Selkowitz, Eds. American Solar Energy Society, New York, 1983. vi, 256 pp., illus. Paper, \$15.

The Patient's Guide to Medical Tests. Cathey Pinckney and Edward R. Pinckney. Facts On File, New York, 1983. xxxvi, 298 pp. Cloth, \$17.95; paper, \$7.95.

Pattern Models. Narendra Ahuja and Bruce J. Schachter. Wiley-Interscience, New York, 1983. xvi, 310 pp., illus. \$39.95.

Perception, Cognition, and Development. Interactional Analysis. Papers from a conference, Holderness, N.H., June 1981. Thomas J. Tighe and Bryan E. Shepp, Eds. Erlbaum, Hillsdale, N.J., 1983. xvi, 364 pp. \$39.95.

Role of the Unsaturated Zone in Radioactive and Hazardous Waste Disposal. Papers from a meeting, Philadelphia, May 1982. James W. Mercer, P. S. C. Rao, and I. Wendell Marine, Eds. Ann Arbor Science (Butterworths), Woburn, Mass., 1983. xxviii, 340 pp., illus. \$37.95.

The Roving Mind. Isaac Asimov. Prometheus Books, Buffalo, N.Y., 1983. x, 350 pp. \$17.95.

The Royal Society of Edinburgh (1783-1983). The First Two Hundred Years. Neil Campbell and R. Martin S. Smellie. Royal Society of Edinburgh, Edinburgh, 1983. xvi, 186 pp. £7.50.

Sacred Sands. The Struggle for Community in the Indiana Dunes. J. Ronald Engel. Wesleyan University Press, Middletown, Conn., 1983 (distributor, Harper and Row, New York). xxii, 352 pp. + plates. \$22.95.

Safety Evaluation and Regulation of Chemicals. Papers from a conference, Boston, Feb. 1982. F. Homburger, Ed. Karger, Basel, 1983. xiv, 294 pp., illus. \$118.75.

The Total Synthesis of Natural Products. Vol. 5. John ApSimon, Ed. Wiley-Interscience, New York, 1983. x, 550 pp., illus. \$60.

Toward an Efficient Energy Future. Proceedings of a symposium, Knoxville, Tenn., May 1982. Mary R. English, Robert A. Bohm, and Lillian A. Clinard, Eds. Ballinger (Harper and Row), Cambridge, Mass., 1983. xxiv, 322 pp., illus. \$28.50.

Personnel Placement

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Ph.D. Research position for the identification of species of the *Drosophilidae* recently collected in Swaziland, Southern Africa, F. P. Saitta, 58 Butler Street, Pittston, Pennsylvania 18640. Telephone: 717-654-6289. X

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Toxicologist. Extensive industrial, academic, chemical regulations experience; program management; seeks position with companies, trade associations in Washington, D.C., Northeast. Box 265, SCIENCE. X

Toxicologist. Ph.D. 1977, D.A.B.T., 6 years of industrial experience managing animal studies, human clinical studies, and regulatory affairs. Seeking managerial position. Box 255, SCIENCE. X

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The Department of Ophthalmology and the Jules Stein Eye Institute, University of California, Los Angeles (UCLA) School of Medicine, are seeking applicants for an assistant professorship in ophthalmology. Individuals dedicated to a career in basic vision research and teaching are encouraged to apply. The Search Committee favors candidates with an interest and background in molecular biology or a related field.

Applications should be submitted with curriculum vitae, bibliography, and a letter discussing career goals to:

Dean Bok, Ph.D.
Chairman, Search Committee
Jules Stein Eye Institute
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The Department of Anatomy, The Ohio State University, is seeking exceptional candidates to fill a tenure-track position. Applicants should have a Ph.D. or M.D. degree and a minimum of 2 years of postdoctoral experience. A successful candidate must have a strong record of scientific accomplishments and the ability to develop an independent research program. The department is committed to forming a strong research group in developmental biology/aging biology. Preference will be given to candidates with research expertise in cellular biology and quantitative morphology. Additional responsibilities include collaborative research, and teaching of both professional and graduate students. Curriculum vitae and three letters of recommendation should be sent by 1 January 1983 to:

James S. King, Ph.D.
Professor and Chairman
The Ohio State University
Department of Anatomy
4066 Graves Hall
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Applications are solicited for an assistant professorship at Rockefeller University. Candidate must have a Ph.D. degree and postdoctoral experience in molecular biology, and a publication record investigating the regulation of gene expression. Research emphasis will be on studying human apolipoprotein gene expression in eukaryotic hosts. The appointee will be able to devote full-time to research and be essentially free of teaching and administrative obligations. Please send curriculum vitae, including publications and the names and addresses of three references, to:

Dr. Jan L. Breslow
Professor of Human Genetics
Rockefeller University
Box 81
1230 York Avenue
New York, N.Y. 10021

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BIOCHEMISTRY FACULTY POSITIONS INDIANA UNIVERSITY—BLOOMINGTON

The Department of Chemistry expects to have at least one opening in biochemistry starting the fall semester 1984. The department is seeking the most talented individuals it can find, preferably with interests in membrane structure and assembly, in structure-function relations of biological macromolecules, or in enzyme reaction mechanisms. Applicants at the senior faculty level must have achieved a position of leadership in their field of research, while applicants at the assistant professor level must show promise of establishing a vigorous independent research program in an academic setting.

Candidates should send curriculum vitae, a publication list, some representative reprints, a brief summary of future research plans, and the names and addresses of three references by 15 November to: **Dr. V. J. Shiner, Jr., Chairman, Department of Chemistry, Indiana University, Bloomington, Ind. 47405. Equal Opportunity/Affirmative Action Employer.**

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The Department of Chemistry at Indiana University plans to make a tenure-track appointment at the assistant professor level in organic chemistry, effective fall 1984. This position will require the ability to organize and present courses at both the graduate and undergraduate levels. Potential candidates are expected to have a solid record of accomplishment in research and show promise of developing vigorous, independent programs of scholarly investigation. To apply, submit a brief biographical sketch, publications list, names of three references, and a short description of ideas for the development of teaching and research programs. Deadline for applications is 30 November 1983. Please apply to:

**Dr. V. J. Shiner, Jr., Chairman
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30 SEPTEMBER 1983

AAAS Report VIII Research & Development, FY 1984

by Willis H. Shapley, Albert H. Teich,
and Jill P. Weinberg

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Applications and nominations (including curriculum vitae, names of references, and a list of publications) should be sent to: **The Biotechnology Research Center, attention: SM, University of Minnesota, 140 Gortner Laboratory, St. Paul, Minn. 55108, by 30 October 1983.**

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Candidates should have R.N. and earned doctorate; must possess record of scholarly achievement or evidence of creative contributions sufficient to qualify them for tenured rank in university faculty.

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Letters of application should be sent before 31 December 1983 to:

Associate Dean Patricia A. Hummel
Chair, Nursing Dean Search and
Screen Committee
c/o Office of Secretary of the Faculty
134 Bascom Hall
University of Wisconsin-Madison
500 Lincoln Drive
Madison, Wis. 53706

POSITIONS OPEN

ASSISTANT PROFESSOR OF MICROBIOLOGY

Applications are invited from qualified individuals for a state-funded, tenure-track appointment in the Department of Basic and Clinical Immunology and Microbiology of the Medical University of South Carolina. Applicants are expected to hold an M.D. and/or a Ph.D. degree and postdoctoral training in microbiology. They will teach microbiology to medical students (one course for one semester yearly), give seminars, and establish an independent program of research in microbiology. Qualified individuals should send curriculum vitae, summaries for proposed research, and the names of three references. Appointments are planned to begin in January 1984. Send all materials to: **Dr. H. Hugh Fudenberg, Chairman, Department of Basic and Clinical Immunology and Microbiology, 171 Ashley Avenue, Charleston, S.C. 29407. The Medical University of South Carolina is an Equal Opportunity Employer.**

ASSISTANT OR ASSOCIATE PROFESSOR OF PHYSIOLOGY. Tulane University School of Medicine, Department of Physiology, invites applications for tenure-track appointment at the assistant or associate professor level. Disciplines of specific interest are cellular or molecular physiology. Applicants must have Ph.D. degree with a record of productivity in research. Salary commensurate with experience and qualifications. Applicants should submit (i) curriculum vitae, including at least three recent publications, (ii) statement of teaching and research goals, (iii) current and pending research support, and (iv) three reference letters to: **F. Edward Dudek, Ph.D., Chairman, Search Committee, Department of Physiology, Tulane University School of Medicine, 1430 Tulane Avenue, New Orleans, Louisiana 70112.** Application should be submitted no later than 15 November 1983. *Tulane University is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT/ASSOCIATE PROFESSOR
DEPARTMENT OF PHYSIOLOGY
University of Connecticut Health Center**

The Department of Physiology with active research programs in cell and membrane biology and biophysics is seeking an individual whose primary interests include fluorescence techniques and their application. A substantially equipped laboratory is available. This is a tenure-track position. Applications should include curriculum vitae, publications, and the names of three or more references. Send to: **Dr. Richard D. Berlin, Head, Department of Physiology, University of Connecticut Health Center, Farmington, Conn. 06032. An Affirmative Action/Equal Opportunity Employer, M/W/H.**

The Department of Veterinary Pathobiology, University of Illinois, College of Veterinary Medicine, invites applications for an **ASSISTANT PROFESSOR** position (tenure-track) in **veterinary parasitology.** The candidate should have a D.V.M./Ph.D. or Ph.D. degree with evidence of training or experience in veterinary parasitology. Duties include teaching parasitology to veterinary and graduate students and development of a strong research program. Special consideration will be given to applicants whose research interests complement existing programs. Research in the department is conducted in microbiology, immunology, pathology, preventive medicine, public health, epidemiology, and parasitology. Salary is negotiable. Inquiries, including a letter of application, curriculum vitae, and three references, should be sent to: **Dr. Kenneth S. Todd, Jr., Chair, Search Committee, Department of Veterinary Pathobiology, College of Veterinary Medicine, 2001 South Lincoln Avenue, University of Illinois, Urbana, Ill. 61801; telephone: 217-333-4689.** To ensure full consideration, applications must be received by 31 January 1984; starting date as soon as possible thereafter.

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

DIRECTOR, School of Health Sciences; tenure-track position available January 1984. Ph.D. in allied health discipline and college teaching experience required; administrative experience desirable. Preferred teaching areas are clinical fields such as physiology, anatomy, microbiology, and so forth. Preference will be given to candidates who are active in allied health organizations and who have demonstrated ability to obtain outside funding. Nominations or letters of application with curriculum vitae should be addressed to: **P. Douglas Kindschi, Dean of Science and Mathematics, Grand Valley State College, Allendale, Michigan 49401. Grand Valley is an Affirmative Action Employer.** Applications will be received until 31 October 1983.

UNIVERSIDAD AUTONOMA

DE CD. JUAREZ

ESCUELA DE MEDICINA

ADVANCED STANDING ADMISSION PROGRAM

The University of Ciudad Juarez, School of Medicine has established a procedure for individuals possessing certain doctoral degree, whereby these individuals may be considered for admission into the medical curriculum at an advanced level as students in the regular five-year program.

It is possible for successful students to complete the core clinical courses and clinical training for the M.D. degree within 32 months

To be considered for admission an individual must possess credentials in one of the following categories

- 1.- A Ph. D. in a basic medical science.
- 2.- A doctoral degree from certain professional school of Dentistry or Veterinary Medicine where the basic sciences is equivalent in content to that of the medical school.
- 3.- A Ph. D. in a (Non-Basic) science are where the transcript can a demonstrate appropriate scientific training.

Individuals with a professional degree in Chiropractic Medicine, Optometry, Osteopathy, Podiatry or Stomatology are not eligible for advanced standing.

Applications must be completed by Nov. 30 of the year prior beginning study in Cd. Juarez.

DIRECT INQUIRES TO:

LUIS RAUL ABBUD ABBUD, M.H.A.
ADMINISTRATOR
UNIVERSIDAD AUTONOMA DE CD. JUAREZ
APDO. POSTAL 231
CD. JUAREZ, CHIH., MEXICO

POSITIONS OPEN

ASSOCIATE PROFESSOR—BIOCHEMISTRY.

The Department of Biochemistry at the University of Mississippi Medical Center invites applications for a tenure-track faculty position. Highly qualified candidates in all areas of biochemistry will be considered. Established fields of investigation include developmental biology, nucleic acid and protein synthesis, membrane biochemistry, and the cloning of eukaryotic genes. Send curriculum vitae and the names of three references by 30 October 1983 to: **Dr. Lawrence Slobin, Department of Biochemistry, University of Mississippi Medical Center, Jackson, Miss. 39216.** *Equal Opportunity Employer, M/F/V/H.*

CHAIRMAN, DIVISION OF METEOROLOGY AND PHYSICAL OCEANOGRAPHY

The Rosenstiel School of Marine and Atmospheric Science is searching for a senior faculty member who is willing to serve one or more 3-year terms as chairman of its Division of Meteorology and Physical Oceanography. The division at present consists of 16 faculty members and about 25 graduate students.

Applicants should be internationally recognized scientists in meteorology or physical oceanography and have experience in leading cooperative research.

Applications, including a current professional résumé and names of three references, should be sent by 1 December 1983 to: **Dr. William W. Fox, Jr., Chairman Search Committee, Rosenstiel School of Marine and Atmospheric Science, University of Miami, 4600 Rickenbacker Causeway, Miami, Fla. 33149.**

Position will remain open until filled.

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

RENSSELAER POLYTECHNIC INSTITUTE (RPI).

Full-time Department of Chemistry positions in the Center for Integrated Electronics. The Center, with industrial and corporate support of \$12 million since 1981, has an IBM EL-2 direct write electron beam lithography system, ion implantation systems, advanced computer-aided design and testing equipment, and specialized laboratories in polymer chemistry, surface analysis, digital and analog design, microprocessor testing, and electro-optics research. Candidates expected to pursue research related to microelectronics such as solid-state chemistry, surface science, plasma, or polymer chemistry. Undergraduate and graduate teaching in the Department of Chemistry. Academic rank, tenure, and salary open. *RPI is an Equal Opportunity/Affirmative Action Employer.* Send résumé and three letters of recommendation to: **Professor Stephen E. Wiberley, Chairman, Department of Chemistry, or Professor Andrew J. Steckl, Director, Center for Integrated Electronics, Rensselaer Polytechnic Institute, Troy, N.Y. 12181.**

CYTOGENETICIST

Children's Hospital of Buffalo and State University of New York at Buffalo

The position of Director of Cytogenetics at Children's Hospital will shortly become vacant. Director is responsible for an ongoing cytogenetic diagnostic service including prenatal diagnosis, within a well-established regional genetic program. Research and participation in teaching are encouraged and the position is associated with an academic appointment in the Department of Pediatrics. Salary commensurate with responsibility and previous experience. Applications, including curriculum vitae, names of three references, and representative reprints, should be sent to: **Dr. Robin M. Bannerman, Director, Division of Human Genetics, 86 Hodge Avenue, Buffalo, N.Y. 14222.** *An Equal Opportunity/Affirmative Action Employer.*

DIRECTOR, NUCLEAR MAGNETIC RESONANCE CENTER. Scientist (Ph.D. or M.D.) with extensive background in NMR to direct NMR Center for Non-Invasive Diagnosis. The facility is a cooperative venture between The University of New Mexico (UNM) and The Los Alamos National Laboratory (LANL). The Center will serve as a focus for basic and clinical research as well as instrument development in NMR in cooperation with existing programs at LANL and UNM. Active research programs and experience in both NMR imaging and spectroscopy highly desirable. Academic rank at The University of New Mexico and appointment at The Los Alamos National Laboratory appropriate to experience. Send curriculum vitae to: **Thomas B. Tomasi, M.D., Ph.D., Chairman, Department of Cell Biology, Director, The University of New Mexico Cancer Center, Albuquerque, N.M. 87131.**

Post Doctoral Scientist Bioinorganic Chemist

Smith Kline & French Laboratories, leader in pharmaceutical research, is seeking a post doctoral scientist in bioinorganic chemistry to join an interdisciplinary research program for the design and development of transition metal compounds with therapeutic potential.

Candidates are required to have a PhD in chemistry with a background in transition metal coordination chemistry and expertise in analytical and separation techniques required for the characterization of transition metal centers in biological systems. This implies familiarity with both molecular biology and chemical characterization techniques.

Our post doctoral appointments are of one year duration and with mutual agreement renewable for a second year. The successful candidate will be expected to make an independent contribution to our research program.

This S K & F environment is designed to foster creative, innovative research and to promote personal and professional growth. We consider post doctoral studies to be of major importance in an individual's career and encourage publication of findings in leading journals and full interaction with the scientific community.

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your c.v. and names of three references to: **Mr. Walter B. Flagg, SMITHKLINE BECKMAN CORPORATION, 1560 Spring Garden Street, Philadelphia, PA 19101.** We are an equal opportunity employer, M/F/H/V.

SK&F
A SmithKline Beckman Company

SCIENTIFIC DIRECTOR HAND SURGERY INSTITUTE

Jewish Hospital, a 466 bed tertiary care facility, is offering a creative and challenging opportunity to work with a renowned Hand Surgery Team. The Scientific Director will be responsible for the development, management and operation of an evaluation laboratory. In addition, the director will develop computerized systems to service the laboratory and research efforts of the institute.

A PhD in Biophysics, Bioengineering, Physiology or Physical Science and experience in a computerized laboratory setting is required. A working knowledge of computer programming and instrumentation are additional requirements.

If you are interested in this position or should you require more information please contact:



**Jane Younger
Vice President
JEWISH HOSPITAL
217 East Chestnut St.
Louisville, KY 40202
(502) 587-4413**

An Equal Opportunity Employer

POSITIONS OPEN

CHIEF TECHNOLOGIST for new regional histo-compatibility laboratory. Requirements include at least 3 years of experience in a clinical laboratory utilizing T and B cells for HLA typing and cross-matching for renal transplantation, ability to supervise a four-person laboratory, maintain quality assurance, train new personnel, and work effectively with the laboratory director and transplant coordinators. Attractive living and working conditions in a Midwestern university community. Salary negotiable, depending on experience and qualifications. Send résumé and covering letter with names of three references to: **Box 270, SCIENCE.**

CURATOR OF BOTANY

The San Diego Natural History Museum is seeking a full-time curator of botany. Expected starting date: 1 February 1984. Qualifications and duties include a Ph.D., responsibility for a major collection, research and publication in systematics, and participation in exhibit and public education programs. Applicants should have a demonstrated record of excellence in research. Familiarity with the flora of the Southwest is desirable. Salary is \$19,000 or higher, commensurate with experience. Send curriculum vitae, a statement of research interests, and names of three references by 1 November 1983 to: **Director, San Diego Natural History Museum, P.O. Box 1390, San Diego, Calif. 92112.**

ECONOMIST

The Committee on Population of the National Research Council seeks candidates for the position of senior staff officer. The incumbent will provide staff support to a 10- to 24-month study, beginning fall 1983, on population growth and economic development relationships. Candidates should have a Ph.D. or equivalent in economics, at least 5 years of experience in scientific population work, demonstrated ability to organize and manage research work done by others, plus excellent writing skills. Salary range: \$32,000 to \$45,000. Please submit curriculum vitae to: **Robert Lapham, Committee on Population, National Research Council, 2101 Constitution Avenue, NW, Washington D.C. 20418. An Equal Opportunity Employer.**

FACULTY POSITIONS IN NEUROBIOLOGY

Positions are open for tenure-track or tenured faculty appointments at the University of Southern California. Candidates must have a doctoral degree and at least 2 years of postdoctoral training. Particular attention will be given to those working in neuroendocrinology and neuropharmacology, but applicants in any area of neurobiology are encouraged to apply. Cellular and molecular approaches are preferred. Candidates will be expected to establish an independent research program of their choice. Please send curriculum vitae, bibliography, names and telephone numbers of four references, and a brief description of career goals and research objectives by 30 November 1983 to:

**Chairman, Search Committee
Section of Neurobiology
Department of Biological Sciences
University of Southern California
Los Angeles, California 90089-0371**

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

FACULTY POSITION IN CELL/DEVELOPMENTAL BIOLOGY

Applications are invited for a tenure-track position in the Department of Biological Sciences at Carnegie-Mellon University. Applicants must be strongly motivated toward carrying out research in cell and/or developmental biology and must be qualified to supervise graduate students and to teach in these areas. We are especially interested in individuals whose research programs combine genetic and molecular approaches to cell and/or developmental biology. Candidates who are just completing their postdoctoral research training will be considered for a position of starting assistant professor; exceptionally well-qualified individuals may be considered for appointment at a higher level. To apply, send curriculum vitae and a concise description of research interests (no more than three pages), and, in addition, have three letters of recommendation sent to:

**Dr. Chien Ho
Department of Biological Sciences
Carnegie-Mellon University
4400 Fifth Avenue
Pittsburgh, Pa. 15213**

Carnegie-Mellon University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ELECTRON MICROSCOPIST—BASIC INVESTIGATOR: Knowledge of TEM/SEM/EDS. Demonstrated capability and evidence of accomplishments in basic research and clinical diagnostic studies. Educational and instructional experience. Demonstrated managerial skills. New position. *Women and members of minority groups are encouraged to apply.* Please forward curriculum vitae to: **John E. Craighead, M.D., Chairman, Department of Pathology, University of Vermont, Burlington, Vermont 05405.** Inquiries should be received by 1 November 1983.

ENTOMOLOGIST. Assistant or associate professor, tenure-track, 60 percent extension, 40 percent research; to coordinate multidisciplinary extension IPM program for Minnesota field crops, plan and conduct education programs and direct applied research program in corn, soybean and/or dry beans. Background in computer applications. Entomology Ph.D. required. Four years of experience required for associate professor. Send résumé, transcripts, and three letters of reference to: **Dr. Richard L. Jones, Department of Entomology, 1980 Folwell Avenue, University of Minnesota, St. Paul, Minn. 55108,** by 15 November 1983. Position available 1 January 1984. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

FACULTY POSITIONS IN CELL BIOLOGY

Applications are invited for several tenure-track positions in the newly reorganized Department of Cell Biology and Anatomy at the Northwestern University Medical and Dental Schools. These positions are for assistant professors and, in exceptional cases, for associate professors. Applicants must have a Ph.D., M.D., or D.D.S. degree with research experience in cell biology, cellular neurobiology, structural biology, developmental biology, or related areas. Applicants should be able to demonstrate excellence or the potential for excellence in their respective fields. Successful applicants will be expected to carry on vigorous research programs and to participate in the teaching of graduate, medical, and dental students. Send complete curriculum vitae, brief description of previous and future research and teaching interests, and recommendations from at least three referees by 15 November 1983 to: **Dr. Robert D. Goldman, Chairman, Department of Cell Biology and Anatomy, Northwestern University Medical and Dental Schools, 303 East Chicago Avenue, Chicago, Illinois 60611. Northwestern University is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.**

FACULTY POSITION IN THE MOLECULAR BIOLOGY OF HIGHER EUKARYOTIC CELLS

The Department of Biological Chemistry in the College of Medicine at the University of California, Irvine, invites applications for a faculty position at the assistant, associate, or full professor level. The department is interested in candidates with research interests and experience involving the imaginative application of the technologies of molecular biology to the study of higher eukaryotic systems, particularly in the areas of gene expression and the regulation of cellular processes. Faculty members are expected to develop and maintain a strong, independent research program in this general area. Teaching responsibilities include instructing medical and graduate students in selected areas of biochemistry and molecular biology. Send curriculum vitae, including a synopsis of past research experience, a detailed description of the proposed research program, and the names of four persons who can be contacted for letters of reference, to: **Search Committee, Department of Biological Chemistry, California College of Medicine, University of California, Irvine, California 92717,** by 31 December 1983. *An Affirmative Action/Equal Opportunity Employer.*

NEUROLOGIST—Assistant/associate professor, Emory University School of Medicine. The Department of Neurology is seeking candidates for academic positions. Preference given to candidates with clinical and research experience in a subspecialty area such as neuromuscular disease, epilepsy, movement disorders, motor control, genetics, the rehabilitation aspects of neurology. Excellent opportunities available for collaboration with neuroscientists in the basic science departments. *The University is an Equal Opportunity/Affirmative Action Employer.* Reply to: **Robert F. Kibler, M.D., Chairman, Department of Neurology, Emory University School of Medicine, 401 Woodruff Memorial Building, Atlanta, Georgia 30322. Telephone: 404-329-5804.**

POSITIONS OPEN

FACULTY POSITION—Section Head, Geriatrics and Gerontology. The Department of Medicine of The Medical College of Wisconsin is recruiting an internist with training or interest in geriatrics and research related to aging. Responsibilities include enhancement of ongoing research programs and administration of the section, as well as the clinical and teaching programs of the section. Faculty appointment and salary will be commensurate with experience. Send curriculum vitae and references to: **Thad C. Hagen, M.D., Professor and Co-Chairman, Department of Medicine, The Medical College of Wisconsin, 8700 West Wisconsin Avenue, Milwaukee, Wis. 53226.**

DEPARTMENT HEAD—DEPARTMENT OF ANIMAL INDUSTRIES. The College of Agriculture and Natural Resources. The University of Connecticut invites applications for the position of professor and head of the Department of Animal Industries. Responsibilities involve the administration and coordination of Animal Science programs in teaching, research, and cooperative extension. Candidates should have a doctorate or equivalent in the animal science or closely related fields with an established record of achievement and experience. Experience should include significant accomplishment in teaching, research, and/or cooperative extension. Applicants must provide evidence of administrative leadership and the ability to work with, and assist in, the professional growth of faculty. Candidates should send résumé (by 1 December 1983), including names, addresses, and telephone numbers of three references to: **Associate Dean John P. H. Brand, Search Committee Chairman, THE UNIVERSITY OF CONNECTICUT, Box-U-90, Storrs, Conn. 06268. An Equal Opportunity/Affirmative Action Employer (SEARCH 3A11).**

MANAGER FOR CHEMICAL INSTRUMENTATION. Applications solicited for a manager to supervise and participate in operation, maintenance, and advancement of departmental instrumentation, and training of postdoctoral and graduate students in its use. Candidates must have previous experience in maintenance and operation of several of the following: magnetic resonance, mass spectrometry, Fourier transform infrared, computers and digital electronics, laser Raman spectroscopy. An advanced degree in chemistry, physics, or electrical engineering is preferred, but candidates with equivalent experience will be considered. Send résumé, transcripts, and three recommendations to: **Dr. Gleb Mamantov, Department of Chemistry, University of Tennessee, Knoxville, Tenn. 37996-1600. An Equal Opportunity/Title IX/Section 504 Employer.**

MARINE BIOLOGY

The Marine Biology Research Division of the Scripps Institution of Oceanography is seeking a biologist, to be appointed in the Professional Research Series, who has a demonstrated commitment to independent research with marine organisms. Candidates having interdisciplinary interests complementary to the broad spectrum of interests represented at this institution are especially encouraged to apply. Fields of research sought include, but are not restricted to, biogeochemistry, midwater biology, marine botany, comparative endocrinology, immunology, molecular biology, and pharmacology. Candidates must possess a Ph.D. or equivalent and be assured of having extramural funds to support their salaries and research for at least 2 years. Limited set-up funds are available. The level of appointment and salary will depend on research achievements. Send curriculum vitae and the names of three references by 15 December 1983 to: **Chairman, Marine Biology Research Division Search Committee, A-002, Scripps Institution of Oceanography, University of California, San Diego, La Jolla, Calif. 92093. An Equal Opportunity/Affirmative Action Employer.**

MEMBRANE BIOCHEMIST

The Cystic Fibrosis Research Center and Department of Physiology and Biophysics, University of Alabama in Birmingham, offer a tenured or tenure-earning position (assistant to full professor) to an individual with demonstrated skills and productivity in the biochemistry of cell membranes. Experience with transport protein characterization, reconstitution and/or isolation preferred. Send résumé and brief description of research interest by 15 November 1983 to: **R. A. Frizzell, Department of Physiology and Biophysics, University of Alabama in Birmingham, University Station, Birmingham, Ala. 35294.**

The University of Alabama in Birmingham is an Equal Opportunity/Affirmative Action Employer.

DIRECTOR, INTRAMURAL RESEARCH PROGRAM

The National Institute on Alcohol Abuse and Alcoholism (NIAAA), Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA), Bethesda, Maryland, is seeking to fill this key Federal position. The NIAAA is responsible for the conduct and support of research and training relating to the causes, prevention, diagnosis, and treatment of alcoholism and other alcohol-related disorders. The Director, Division of Intramural Clinical and Biological Research exercises primary responsibility for planning, organizing, evaluating and directing all aspects of the intramural programs for the Institute, including a clinical research ward in the National Institutes of Health Clinical Center and basic laboratories on and off campus. The Division has a FY 83 budget of \$7.4 million with a staff of 83. For medical officers, minimum requirements include a degree of Doctor of Medicine or Doctor of Osteopathy. For other candidates, a Ph.D. degree in an academic field related to the health sciences pertinent to the work of the position is desirable, but a bachelor's degree is acceptable with additional qualifying experience. All candidates must also demonstrate progressively responsible experience in scientific research administration and have proven professional competence in the areas related to the intramural research function. Salary to \$67,200 (selectee may be eligible for up to \$10,000 per annum-Physicians Comparability Allowance). For additional information regarding the position and/or qualification requirements, including requesting an application form SF-171, contact: Ms. Margaret Skinker. Applications must be sent to: Division of Personnel Management, NIAAA Bldg. 10/ACRF Rm. 3C103, 9000 Rockville Pike, Bethesda, Maryland 20205, (301) 496-6748 by September 30, 1983. Late applications will be accepted until one day before the qualifications review board meets.

AN EQUAL OPPORTUNITY EMPLOYER

Berkeley Center for X-Ray Optics

Lawrence Berkeley Laboratory

Applications are being accepted for positions at the newly formed Center for X-Ray Optics at Lawrence Berkeley Laboratory (LBL). The Center will provide specialized expertise on XUV (broadly, 10 eV to tens of keV) radiation techniques and their general applications to science and industry; and it will emphasize the emerging technologies required for the efficient transport, dispersion, focusing and detection of XUV radiation from synchrotron light and other sources of radiation. The Center, which will consist of a core group at LBL and affiliated Research Associates from the scientific and industrial community throughout the country, will develop new XUV techniques for scientific applications in physics, chemistry, materials science and the life sciences. It will be closely associated with synchrotron radiation sources and will be also involved with other emerging sources of XUV radiation.

Positions are available for Ph.D. scientists with expertise in the following areas:

- General x-ray instrumentation;
- Multilayer coatings for x-ray optics;
- Monochromator design;
- Reflective and diffractive x-ray optics; and
- X-ray detectors.

Send two copies of resume to: J. Schilling, Lawrence Berkeley Laboratory, Employment Office, Building 65, One Cyclotron Rd., Berkeley, CA. 94720. Equal opportunity employer, m/f/h.



**LAWRENCE
BERKELEY
LABORATORY**

THE LADY DAVIS FELLOWSHIP TRUST P.O. Box 1255, Jerusalem 91904, ISRAEL

Fellowships for 1984-85
at the Hebrew University of Jerusalem or the
Technion-Israel Institute of Technology, Haifa

GRADUATE AND POST-DOCTORAL FELLOWSHIPS

ELIGIBILITY: Lady Davis Fellows are selected on the basis of demonstrated excellence in their studies, promise of distinction in their chosen fields of specialization and qualities of mind, intellect and character.

APPLICATION INFORMATION: Graduate candidates may apply during their senior undergraduate year or after they have undertaken study in a graduate school. Post-doctoral candidates may apply not later than 3 years after completion of their doctoral dissertation.

The Fellowships are tenable for one year but may be granted for another year.

The grant covers travel, tuition fees and reasonable living expenses.

VISITING PROFESSORSHIPS

are intended for candidates with the rank of Full or Associate Professor at their own institution. They are tenable from one trimester (or semester) to a full academic year.

DEADLINE: Completed forms in all categories must reach Jerusalem not later than December 1, 1983. Late applications will not be considered.

Candidates, including Israelis abroad, may obtain application forms at the above address. Please indicate category of Fellowship required.

NATIONAL CANCER INSTITUTE DIVISION OF CANCER TREATMENT RADIATION ONCOLOGY PROGRAM

Staff Fellow (Ph.D.)

Salary Range—\$17,000 to \$34,269
(Having less than 3 years professional
Research Experience)

Senior Staff Fellow (Ph.D.)

Salary Range—\$20,688 to \$38,422
(3-7 years Research Experience)

Staff Fellow or Senior Staff Fellow with credentials in chemical synthesis (organic, organometallic, or inorganic chemistry). Candidate must have or will soon complete the Ph.D. degree.

Previous experience in synthesis and/or work with radionuclides is helpful. Position involves synthesis of ligands to bind radionuclides to monoclonal antibodies at the National Cancer Institute, National Institutes of Health.

Position information and qualifications requirements may be obtained by contacting:

**Dr. Otto Gansow, Radiation Oncology Branch
Inorganic and Radioimmune Chemistry Section
National Cancer Institute, Building 10, Room B3B69
Bethesda, MD 20205, 301-496-2642**

Please send resume, CV, and bibliography
to above address.

An Equal Opportunity Employer

POSITIONS OPEN

MASS SPECTROSCOPIST—Case Western Reserve University. Faculty position available in the Department of Pediatrics at Cleveland Metropolitan General Hospital for a bioorganic mass spectroscopist to supervise the GC-MS Laboratory and to participate in research in diabetes and perinatal metabolism/nutrition. Opportunities to develop independent research. Salary and position dependent on qualification and experience. Interested person should send résumé and names of references to: **Satish Kalhan, M.D., Department of Pediatrics, Cleveland Metropolitan General Hospital, 3395 Scranton Road, Cleveland, Ohio 44109.**

AFRICAN MICROBIOLOGISTS, parasitologists, immunologists, and immunochemists specializing in animal diseases are needed by international laboratory in Kenya. Africans with M.S. or Ph.D. interested in these or other positions in public or private sector in Africa are invited to submit résumés for placement and financial assistance in relocation to: **Intergovernmental Committee for Migration, 1346 Connecticut Avenue, NW, Washington, D.C. 20036.**

MOLECULAR BIOLOGIST

Twelve-month, tenure-track faculty molecular biology position, devoting 75 percent time in developing a program of basic research in molecular biology or molecular genetics of plants or plant-related biochemical systems and to participate (25 percent) in the teaching program. Salary and rank open. Send résumé, three letters of support, and a brief statement of research interests by 15 October to: **J. M. Daly, Department of Agricultural Biochemistry, University of Nebraska—Lincoln, Lincoln, Nebraska 68583-0718. Telephone: 402-472-2937. Affirmative Action/Equal Opportunity Employer.**

OBSERVATORY DIRECTOR, UNIVERSITY OF MASSACHUSETTS/AMHERST. The Department of Physics and Astronomy invites applications for the position of **professor of astronomy** with tenure to serve as **director of the Five College Radio Astronomy Observatory**. Responsibilities include the scientific guidance and administrative management of the observatory and its 14-meter, millimeter-wave telescope, located 10 miles from Amherst, as well as planning for future related activities both on site and elsewhere. Direct inquiries to: **Professor William M. Irvine, Astronomy, GRC Tower B, University of Massachusetts, Amherst, Mass. 01003.** Deadline for submission of application: 15 January 1984. *The University of Massachusetts is an Affirmative Action/Equal Opportunity Employer.*

PLANT MOLECULAR PHYSIOLOGIST

West Virginia University. Postdoctoral positions (two) available immediately for 1 to 2 years for the study of enzymatic and nucleic acid changes during fruit maturation and ripening. Candidates should have knowledge in areas of protein chemistry, gene expression and recombinant DNA technology. Candidates will join a research program aimed at obtaining cDNA probes to identify gene sequences and proteins that undergo differential regulation during ripening and differential stresses in wound healing. Salary is \$19,000 or more, commensurate with qualifications. Send curriculum vitae and names of three references to: **Dr. Fred Abeles, Appalachian Fruit Research Station, Route 2, Box 45, Kearneysville, W. Va. 25430.**

POSTDOCTORAL—SITE-DIRECTED GENETICS. I'd like to find a postdoctoral to work in an NIH-supported project, already under way, concerned with basic mechanisms in the area of genetic translation. Deoxyoligonucleotide synthesis and recombinant DNA techniques will be combined with potent bacterial genetics. If interested, please send curriculum vitae and the names of three references to: **Dr. Michael Yarus, Department of MCD Biology, University of Colorado, Boulder, Colorado 80309.**

POSTDOCTORAL POSITION IN REPRODUCTIVE PHYSIOLOGY available immediately to study the neuroendocrine control of gonadotropin secretion. Emphasis is on the mechanisms controlling hypothalamic GnRH secretion and GnRH regulation of gonadotropin release. Send curriculum vitae, summary of interests, and references to: **Dr. M. Susan Smith, Department of Physiology, University of Pittsburgh School of Medicine, Pittsburgh, Pa. 15261. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

NMR SPECTROSCOPIST

The Massachusetts Institute of Technology (MIT) Francis Bitter National Magnet Laboratory is seeking an NMR spectroscopist to utilize sophisticated NMR methods to determine the structure of proteins using two-dimensional and sequential assignment techniques. Will undertake independent research to conceive and apply new pulse techniques to the study of biological macromolecules. Ph.D. in physical chemistry or related field and deep understanding of experimental and theoretical aspects of NMR required. Expertise in multiple quantum NMR of biomolecules and experience in photo-CIDNP techniques and NMR of oligonucleotides also required. Salary range: \$26,000 to \$30,000.

Please submit two copies of résumé, referencing Job Number R1172, to: **Dr. Leo Neuringer, c/o MIT Personnel Office, E19-239, 77 Massachusetts Avenue, Cambridge, Mass. 02139. MIT is an Equal Opportunity/Affirmative Action Employer.**

PATHOLOGIST—CELL BIOLOGIST: M.D./Ph.D. Established investigator for faculty position. Basic experimental cell biology and/or immunology with emphasis on **CELL MEMBRANE STRUCTURE/FUNCTION**. New position. *Women and members of minority groups are encouraged to apply.* Please forward curriculum vitae to: **John E. Craighead, M.D., Department of Pathology, University of Vermont, Burlington, Vermont 05405.** Replies will be accepted until 1 November 1983.

PATHOLOGIST—CELL BIOLOGIST: M.D./Ph.D. Established investigator for faculty position. Basic experimental cell biology and/or immunology. **ANIMAL GENETICS.** New position. *Women and members of minority groups are encouraged to apply.* Please forward curriculum vitae to: **John E. Craighead, M.D., Chairman, Department of Pathology, University of Vermont, Burlington, Vermont 05405.** Replies will be accepted until 1 November 1983.

PLANT MOLECULAR BIOLOGIST

Purdue University, Department of Horticulture, has a position open for assistant or associate professor on a tenure-track, 12 months. Initiation of a research program in the application of molecular biology to improve productivity and/or quality of horticultural crops is expected. Approaches should form a bridge between basic cellular/molecular biology and plant genetics. Applicants should have a Ph.D. degree and demonstrated interest and ability to conduct research in plant molecular biology. Applicant must have a strong background in plant biochemistry or physiology and genetics. An ability to communicate effectively and to direct graduate students is expected. Experience beyond the Ph.D. such as a postdoctorate or a previous research appointment is highly desirable. Salary will be competitive and commensurate with training and experience. Applications will be accepted through 15 January 1984 or thereafter, until position is filled. Biographical information, a statement of professional goals, reprints of pertinent publications, transcripts, and names of four references should be sent to:

**Professor Joe H. Cherry
Chairman, Search Committee
Department of Horticulture
Purdue University
West Lafayette, Ind. 47907**

Purdue is an Equal Opportunity/Affirmative Action Employer.

TOXICOLOGIST OR BIOCHEMIST—The National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control, is seeking a toxicologist or biochemist to serve on the Science Advisory Staff in the Office of the Director. The successful candidate will be involved in assisting in evaluating NIOSH positions in occupational safety and health relevant to the NIOSH mission; reviewing NIOSH research priorities; performing continual evaluation and review of NIOSH research projects; recommending priorities for criteria documents; formulating and evaluating emerging and current problems in occupational health and safety. Candidate must be a toxicologist or biochemist with experience in the development and direction of scientific research programs and with a commensurate record of scientific accomplishment. This position is in the Career Civil Service GS-14 or -15, or the Public Health Service Commissioned Corps. Salary range: \$41,227 to \$57,500, depending on qualifications, experience, and personnel systems. Interested candidates should send applications to: **Jenny Garner, Centers for Disease Control, Personnel Office, Building 1, Room 1050, Atlanta, Georgia 30033. An Equal Opportunity Employer**

POSITIONS OPEN

POSTDOCTORAL ASSOCIATE for study of the role of fungal components in determining plant resistance. Experience in membrane and carbohydrate characterization an advantage. Send résumé and three letters of recommendation by 15 November to: **Dr. Anne Anderson, UMC 45, Utah State University, Logan, Utah 84322. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION available for Ph.D. to study interactions between neurohypophyseal peptides and renal prostaglandins and explorations of applications as diuretics/antihypertensives. Experience in prostaglandin analytical and biochemistry highly desirable. Send curriculum vitae and names of three references to: **Dr. W. Y. Chan, Department of Pharmacology, Cornell University Medical College, New York, N.Y. 10021.**

POSTDOCTORAL POSITION. USPHS-supported postdoctoral position available immediately in the Biology Department, University of California, San Diego (UCSD). Individuals interested in the molecular characterization of the genes coding for T-cell receptors and factors, with experience in molecular biology and recombinant DNA research, are encouraged to apply. Send curriculum vitae, three references, and summary of research interests to: **Dr. Richard Dutton or Dr. Stephen Hedrick, UCSD, Department of Biology (M-001), La Jolla, Calif. 92093. The University of California, San Diego, is an Affirmative Action/Equal Opportunity Employer.**

TWO POSTDOCTORAL POSITIONS AVAILABLE. Opportunity to participate in: (i) studies of apolipoprotein levels in clinical patients, apolipoprotein characterization by biochemical, immunologic, and monoclonal antibody procedures; and (ii) the initiation of studies designed to characterize polymorphisms of apolipoprotein genes. Apolipoprotein radioimmunoassays and mouse hybridoma technology are currently operational in the laboratory. Positions are supported by NIH training grant, supplemented to institutional levels. U.S. citizen or immigrant visa required. Write to: **B. A. Kottke, M.D., Atherosclerosis Research Laboratory, Mayo Clinic, Rochester, Minnesota 55905. Telephone: 507-285-5902. An Equal Opportunity/Affirmative Action Institution.**

POSTDOCTORAL POSITION available immediately to work on biochemistry of lignin-degrading enzymes [*Science* 221, 661 (1983)]. Familiarity with protein purification and metallo-enzymes desired. Send curriculum vitae and names of three references to: **T. Kent Kirk, Department of Bacteriology, University of Wisconsin, Madison, Wis. 53706.**

POSTDOCTORAL POSITION, Cancer Center of Hawaii, University of Hawaii, full-time, Trust funds; to begin approximately 1 November 1983 for at least 1 year; continuation dependent upon availability of funds. Duties: to study formation of mutagens in vivo due to inhaled air pollutants. Background in organic or analytical chemistry helpful. Prefer experience with nitroso-/nitro-, or trace organic analysis. Salary: \$1,348 per month minimum; \$1,999 per month maximum. Send résumé with names, addresses, and telephone numbers of three references to: **Dr. Philip Ross, Cancer Center of Hawaii, 1236 Laulaha Street, Honolulu, Hawaii 96813.** Closing date: 21 October 1983. *Equal Opportunity Employer.*

POSTDOCTORAL POSITION available immediately for studies of the neural control of eye movement using chronic unit recording, microstimulation, anatomical and behavioral techniques. Send curriculum vitae and three letters of reference to: **David L. Sparks, Ph.D., Department of Physiology and Biophysics, University of Alabama in Birmingham, Birmingham, Ala. 35294. An Affirmative Action/Equal Opportunity Employer.**

Several **POSTDOCTORAL POSITIONS** available during 1983/1984 in the **Developmental Biology Center, University of California, Irvine, California 92717.** Recent Ph.D. required, preferably in cell, molecular, or developmental biology; neurobiology or genetics. Positions are for research with Dr. Ron Meyer (development of optic nerve connections); Dr. Scott Fraser (developmental neurobiology; cell communication); and Dr. Susan Bryant (limb development and regeneration in amphibians and mammals). *The University of California is an Equal Opportunity/Affirmative Action Employer.* For more information, contact the individuals above, or to apply, submit résumé and brief description of research interests and experience, together with names of three individuals qualified to evaluate your work, to: **Director, Developmental Biology Center** (address above).

ASSISTANT DIVISION HEAD Salary Open

The Applied Science Division seeks an Assistant Division Head to work with the Division Head and Deputy Head in coordinating the research activities of the Division. The Division has an interdisciplinary staff of some 330 scientists, engineers, and support personnel. Areas of research interests include: electrochemical energy storage; fossil and biomass conversion to liquid fuels; solar heating and cooling of buildings; solar thermal conversion; energy conservation in buildings with an emphasis on windows and lighting, computer simulation, indoor air quality, and building envelopes; atmospheric processes with an emphasis on atmospheric aerosols and acid rain; combustion of fossil fuels; advanced instrumentation; and energy policy.

DUTIES:

A primary duty is working with the Division's scientists to develop new research areas. The Assistant also helps with resource allocation (e.g., equipment and laboratory space); long range planning; the development of information in response to requests from government officials; the development of material for presentations of the Division's research; personnel matters as they relate to the professional development and compensation of the Division's scientists; and the formulation of Division policy. The Assistant Division Head frequently represents the Division in interactions with personnel in other parts of the Laboratory, and by attending (usually in the absence of the Deputy or Division Head) Laboratory-wide meetings. The Assistant is also called upon to represent the Division during visits of distinguished visitors, outside reviewers, and government officials.

Initially, the Assistant is expected to devote full time to the above duties. However, with time, it is expected that the person will develop his or her own research projects or become a participant in ongoing projects.

REQUIREMENTS:

A Ph.D. in engineering or science, and several years of research experience beyond the Ph.D. are required. Experience in an area related to one or more of the Division's current activities is desirable. An interest in or demonstrated aptitude for scientific administration, good communication skills, and an ability to work under tight deadlines are essential. May be a term appointment with possibility of renewal or an indefinite appointment, and may be at the Staff Scientist II or III level, depending on the qualifications and experience of the chosen candidate.

Send Resumes and References To: **Lawrence Berkeley Laboratory, Employment Office, Building 65, #1 Cyclotron Rd., Berkeley, CA. 94720. Attention: Ron Lowder.** An equal opportunity employer, m/f/h.



**LAWRENCE
BERKELEY
LABORATORY**

CHIEF, IMMUNOBIOLOGY AND IMMUNOCHEMISTRY BRANCH IMMUNOLOGY, ALLERGIC AND IMMUNOLOGIC DISEASES PROGRAM

Salary range:

\$48,553-\$63,115 — General Schedule Pay Scale.

\$51,353-\$65,357 — Medical Officer Pay Scale.

In addition, applicant may be eligible for Physicians

Comparability Allowance up to \$10,000.

Description:

This position is concerned with NIAID Extramural Activities of the Immunology, Allergic and Immunologic Diseases Program. The Chief of the Immunobiology and Immunochemistry Branch plans and conducts the NIAID's research grants, training grants, fellowships, career awards and research resources programs in the area of basic immunology. He/she is responsible for coordinating the various support programs, develops priorities within the scientific program area of immunobiology and immunochemistry, and develops and maintains liaison with appropriate departments of universities, other institutions, other components of the NIH and DHHS, advisory bodies and other relevant scientific organizations.

Qualifications and requirements for the position:

Applicant must possess a doctorate degree in medical science (M.D.) or degree in the biological sciences (Ph.D., D.V.M., D.D.S., D.O.) with substantial experience in research and administrative capabilities or equivalent experience; must also have extensive and current background knowledge in immunology.

Person to be contacted for further information:

Sheldon G. Cohen, M.D. (301-496-1884), Director
Immunology, Allergic and Immunologic Diseases Program

Applications should be sent to:

NIAID Personnel Office, Attention: Jane Schriver
9000 Rockville Pike, Building 31, Room 7A31, Bethesda, MD 20205

**National Institutes of Health
National Institute of Allergy and Infectious Diseases**
NIH is an Equal Opportunity Employer.

SR. RESEARCH MATERIALS SCIENTIST



SOHIO CORPORATE RESEARCH

Sohio's commitment to the development application of high performance structural materials requires the expertise of a senior Research Materials Scientist to work at our Corporate Research Center in a suburban community near Cleveland. In this newly created position, reporting to the Manager of Biotechnology and Materials Science, you will be instrumental in setting the tone and direction for research of our high performance structural materials programs.

Your background must include a PhD in Materials Science, Chemistry or Metallurgy, and 10+ years of diversified industrial or academic experience in the structural materials area, preferably in composite materials and physical metallurgy. Your comprehensive working knowledge of high performance materials, composites, fracture mechanics, composite micromechanics, ceramics, physical metallurgy or solid mechanics is essential.

We offer an excellent salary/benefits package, as well as the opportunity to contribute your skills in a

personally and professionally rewarding environment. **Sohio's comprehensive relocation package for new hires includes all normal moving expenses. Homeowners also qualify for mortgage interest differential allowance, third party home purchase and other features typically restricted to internal transfers.**

For immediate, confidential consideration, please send your resume, listing your patents, publications and other professional activities, to:

Peter J. Piro, Senior Executive Recruiter

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POSITIONS OPEN

POSTDOCTORAL—NEUROMUSCULAR PHYSIOLOGY/PHARMACOLOGY

Postdoctoral research position available immediately to study alterations in neuromuscular function following burn injury both in vivo and in vitro. A Ph.D. or M.D. is required and the applicant should have a background in neuromuscular physiology or pharmacology. Concurrent appointment at Massachusetts General Hospital, Shriners Burns Institute, and Harvard Medical School. Résumé to: J. A. Jeevendra Martyn, M.D., Department of Anesthesia, Massachusetts General Hospital, Boston, Mass. 02114. *Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS. The Harvard School of Public Health, Department of Cancer Biology, has postdoctoral positions available for study of the molecular genetic, virological, and immunological aspects of feline leukemia virus and human T-cell leukemia virus associated diseases and of the etiology of Acquired Immune Deficiency Syndrome.

Applicants with experience in recombinant DNA methodology, protein biochemistry, immunology, or retrovirology should send curriculum vitae and names of three references to: Dr. James I. Mullins (molecular genetics and molecular virology) or Dr. M. Essex (virology and protein biochemistry), Department of Cancer Biology, Harvard School of Public Health, 665 Huntington Avenue, Boston, Mass. 02115.

Harvard University is an Equal Opportunity Employer with an Affirmative Action Program.

POSTDOCTORAL POSITION—GENETICISTS with interest in toxicology or carcinogenesis are invited to apply for position at the Ludwig Institute for Cancer Research in a group which is developing new techniques for studying the relations between cancer rates and diet. Send curriculum vitae and names of three referees to: Dr. J. A. Heddle, Ludwig Institute for Cancer Research, Toronto Branch, 9 Earl Street, Toronto, Ontario, Canada M4Y 1M4.

POSTDOCTORAL POSITIONS IN PROTEIN CHEMISTRY

Research involves studies of the structure and physical chemistry of bone-specific proteins and proteins of the blood coagulation process. Projects include: studies of the structure and function of coagulation factor protein-membrane complexes; identification of the congenital defects in abnormal prothrombins; the primary structures of factor V and factor VIII using microsequencing techniques; the function of the domains of von Willebrand factor and isolation and characterization of bone-specific proteins.

Send curriculum vitae and names of three references to: Dr. Kenneth G. Mann or Dr. David N. Fass, Hematology Research, Mayo Clinic Foundation, Rochester, Minn. 55905.

RADIATION BIOLOGIST—Ph.D., wanted to join the Radiation Research Division of the Department of Radiation Oncology at a tenure-track level of assistant or associate professor. Applicants should plan to continue their established, externally funded research program(s) which provide about 70 percent of their support and to develop interactions with existing Division programs (in vivo effects of ionizing and nonionizing radiation and hyperthermia on normal and tumor tissue and in vitro radiation carcinogenesis). Applicants should have a demonstrable record of research accomplishments in mammalian radiobiology/pathology and should expect to participate in educational programs in this area. Submit curriculum vitae with bibliography, a statement of research interests, and the names of three references to: Dr. Hubert A. Eddy, Director, Division of Radiation Research, University of Maryland, School of Medicine, 660 West Redwood Street, Baltimore, Md. 21201. *The University of Maryland is an Equal Opportunity/Affirmative Action Employer.*

Crop Genetics International, a plant biotechnology company located in Dorsey, Maryland, in close proximity to U.S. Department of Agriculture, Beltsville facilities, will be adding **STAFF** to its **SCIENTIFIC AND PRODUCTION TEAMS**. Individuals with skills and experience in plant tissue culture, horticultural management and production, greenhouse and/or nursery management and production, plant pathology, and microbiology are encouraged to apply. Please forward curriculum vitae and a statement of professional experience and objectives to: Teena Sherwood, Crop Genetics International, 7170 Standard Drive, Dorsey, Md. 21076. *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

TWO POSTDOCTORAL POSITIONS available early 1984 to study bacterial cation transport. One position requires experience with bacterial genetics and/or recombinant DNA techniques. The other position requires experience in membrane biochemistry and/or enzymology. Send résumé and three letters of recommendations to: Dr. Barry P. Rosen, Department of Biological Chemistry, University of Maryland School of Medicine, Baltimore, Maryland 21201. *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE POSITION in neurochemistry available immediately. Isolation of synaptic membrane protein, reconstitution into liposomes, and topographic localization of the protein in membranes. Applicants should have background in biochemistry or neurochemistry, preferably in membrane biochemistry and biophysics. Salary: \$16,000 to \$18,000. Forward curriculum vitae and references to: Dr. Elias K. Michaelis, Department of Human Development, University of Kansas, Lawrence, Kans. 66045.

An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE CELL BIOLOGY/BIOCHEMISTRY

Position available in laboratory conducting research on microtubule proteins of neuronal and secretory tissue as well as on mitotic spindle. Projects involve protein chemistry, including protein modification and protein phosphorylation, electron microscopy, monoclonal antibody production, immunofluorescence microscopy, microinjection of cultured cells and dividing sea urchin eggs, and other techniques. Send curriculum vitae and names of three references to: Dr. Richard Vallee, Cell Biology Group, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.

An Equal Opportunity/Affirmative Action Employer

PRE- AND POSTDOCTORAL POSITIONS available for studies on the molecular biology of ribosome biogenesis in prokaryotic and eukaryotic systems and the involvement of mRNP particles in growth and differentiation. Stipends to \$19,000. Teaching opportunities available. Please send curriculum vitae and names of three referees to:

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

RESEARCH—GENETICS/TERATOLOGY. Child Development and Rehabilitation. Children's Hospital of Philadelphia (CHOP), seeks research assistant professor. Required: Ph.D. in biochemistry, research experience in genetics, pharmacology, laboratory experience in genetic regulation of steroid receptors, prostaglandin biosynthesis, and cleft-palate induction. Curriculum vitae to: Dr. Henry S. Cecil, Director, Child Development and Rehabilitation, CHOP, 34th Street and Civic Center Boulevard, Philadelphia, Pa. 19104. *The Children's Hospital of Philadelphia and the University of Pennsylvania are Equal Opportunity/Affirmative Action Employers.*

RESEARCH ASSOCIATE IN STRUCTURAL BIOCHEMISTRY AND MASS SPECTROMETRY

The Department of Pharmaceutical Chemistry and the NIH National Mass Spectrometry Resource at University of California, San Francisco, have a long-term staff position at the adjunct assistant or adjunct associate professor level starting 1 November 1983 with a salary range between \$22,900 and \$33,900. We are seeking an individual with experience in elucidation of structures of glycoconjugates, antigenic determinants and/or substrate receptor complexes. Person must have experience in peptide and carbohydrate sequencing by biochemical as well as mass spectrometric techniques. A strong candidate with appropriate isolation and structural characterization credentials and a strong interest in learning modern techniques of mass spectrometry will also be considered. Successful applicant will be expected to contribute to graduate teaching, to develop a strong core and collaborative research program, and to devote a fraction of his/her effort to interdisciplinary training and service projects. Applicants should submit curriculum vitae, a brief description of their teaching interests and proposed research, copies of their reprints and manuscripts, and three letters of recommendation to: Professor A. L. Burlingame, Department of Pharmaceutical Chemistry, University of California, San Francisco, Calif. 94143. *The University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

TWO POSTDOCTORAL POSITIONS available to study the immunobiology of macrophages in cellular immune disorders of the nervous system. Research experience in cellular immunology, cell biology and/or membrane biochemistry desirable. Salary: \$18,000 to \$23,000. Each position initially for 1 year; renewable for two further years. Send résumé and three reference letters to: Dr. John Prineas, Department of Neurosciences, University of Medicine and Dentistry of New Jersey-New Jersey Medical School, 100 Bergen Street, Newark, N.J. 07103.

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL AND PREDOCTORAL OPENINGS in two well-equipped membrane research laboratories at University of California, Los Angeles (UCLA). Send résumé, statement of interests, and names of three references to: Professor John Bramhall, Department of Microbiology and Immunology, UCLA Cancer Center, or Professor B. J. Wisniewski, Department of Microbiology and The Molecular Biology Institute, UCLA, Los Angeles, Calif. 90024. Details available on request.

POSTDOCTORAL RESEARCH POSITION—Available now or 1984 for studies on membrane control of coupling in oxidative phosphorylation. Recent Ph.D. in biochemistry, biophysics, or cell physiology with knowledge of membrane transport and/or membrane dynamics. Competitive salary. Send curriculum vitae and names of three references to: Dr. H. Rottenberg, Department of Pathology, HAHNEMANN UNIVERSITY, Broad and Vine, Philadelphia, Pa. 19102. *Affirmative Action Employer.*

U.S. Department of Agriculture
Human Nutrition Research Center (HNRC)
on Aging at Tufts University
RESEARCH ASSOCIATE

Postdoctoral position available immediately for person interested in the effects of aging (and nutrition) on eye lens protein turnover. Primary focus is on the effects of aging on the catalytic competency of lens proteases. Candidates should have a Ph.D. in biochemistry and experience in metabolic studies including protein turnover. Submit résumé listing publications and relevant training (including grades) to:

Thomas D. Sykes
Personnel: HNRC
711 Washington Street
Boston, Mass. 02111

RESEARCH NUTRITIONIST POSITION to investigate the bioavailability of vitamins in plant foods with emphasis on mechanisms responsible for production and processing effects and nutrient/vitamin interactions. Ph.D. with some postdoctoral research experience preferred. Salary: \$24,500 to \$33,000, depending on qualifications. Please send curriculum vitae and references by 14 October 1983 to: Dr. Antoinette A. Betschart, U.S. Department of Agriculture, 800 Buchanan Street, Berkeley, Calif. 94710. *An Equal Opportunity Employer.*

The Department of Ophthalmology at the University of Illinois is seeking a distinguished **SENIOR RESEARCHER** in the visual sciences for a tenured full professorship/associate professorship. The successful candidate must have a proven record of high quality basic or clinical research. The position will be staffed in the new Lions of Illinois Eye Research Institute which is a facility providing over 20,000 square feet of space devoted to eye research.

Please send curriculum vitae and salary history to:

Morton F. Goldberg, M.D.
Department of Ophthalmology
University of Illinois
1855 West Taylor
Chicago, Ill. 60612

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

The Department of Linguistics seeks **SPECIALIST IN SEMANTICS** or related areas, for fall 1984. Full-time research in Institute of Cognitive Science. Appointment at assistant professor level expected, but candidates at all levels considered. Salary commensurate with rank and experience. Experience with computational models desirable. Send two copies of curriculum vitae and three references (name, address, telephone) by 1 December 1983 to: Alan Bell, Chair, Department of Linguistics, Box 295, University of Colorado, Boulder, Colo. 80309. *The University of Colorado is an Equal Opportunity/Affirmative Action Employer.*

SCIENCE

Advertising staff has opening for **SALESPERSON** in northern California, Oregon, Washington territory.

Background in biology, chemistry, or computing essential.

Applicant must be self-starter with some technical sales experience.

Salary plus commission, expenses, and good fringe benefits.

Interviews in northern California the week of 3 October.

Call or write:

Richard L. Charles, Vice President, Sales
Scherago Associates, Inc.
1515 Broadway
New York, N.Y. 10036
Telephone: 212-730-1050

Project Leader Needed

Position available immediately to develop in vitro diagnostic products for the identification of cell surface antigens associated with disease.

Experience in immunology and monoclonal antibody technology required. Applicant with Ph.D. or equivalent and two years or more industrial experience preferred.

Genetic Systems is a leader in the field of biotechnology. Using monoclonal antibodies, the Company is developing products for the diagnosis and treatment of human diseases.

Genetic Systems is an equal opportunity employer that offers competitive salaries and excellent benefits. Please send your resume to Dr. Robert C. Nowinski, Scientific Director.



Genetic Systems
CORPORATION

3005 First Avenue, Seattle, WA 98121

Molecular Geneticists

Genex Corporation, an innovative biotechnology company, is expanding the Molecular Genetics Department. The new staff will join an established group of creative scientists developing improved systems for expression and secretion of foreign proteins in microorganisms. **Genex** is seeking both senior and junior level scientists with strong research backgrounds in the following areas:

- **Molecular genetics of E.Coli, S.cerevisiae, and B.subtilis**
- **Recombinant DNA methodology**
- **In vitro mutagenesis**
- **Nucleic acid enzymology and biochemistry**
- **Molecular biology of plasmids and phage vectors**
- **Secretions of proteins by microorganisms**

Applications are invited from senior investigators as well as from candidates with recent post-doctoral training and from candidates trained at B.S. and M.S. levels. A curriculum vitae describing your scientific background, publications, and three professional references should be submitted prior to October 15, 1983, to:

Genex Corporation • Department J • 6110 Executive Blvd. • Rockville, MD • 20852
Principals Only - EOE



POSITIONS OPEN

YALE UNIVERSITY SCHOOL OF MEDICINE POSTDOCTORAL TRAINEE

Position available immediately to investigate the hormonal regulation of melanoma growth and pigmentation. Research employs a variety of genetic and biochemical techniques with cultured melanoma cells. Emphasis placed on structure and function of receptors for MSH in mutant and wild-type cell lines.

Position is for 1 to 4 years, funded by the NIH. Send curriculum vitae and three letters of reference to: **Dr. John Pawelek, Department of Dermatology, Yale University School of Medicine, New Haven, Connecticut 06510. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE PROFESSOR POSITION

A nontenured-track position is available for studies of axonally transported proteins involved in nerve regeneration. Candidates should have several years of previous postdoctoral experience in the area of neurochemistry and have mastered techniques of *in vitro* axonal transport, two-dimensional gel electrophoresis, and computer-assisted data analysis. The position also involves supervision of other researchers. Send curriculum vitae to: **Dr. David Wilson, Department of Physiology/Biophysics, University of Miami, School of Medicine, P.O. Box 016430, Miami, Fla. 33101. An Equal Opportunity/Affirmative Action Employer.**

VICE PRESIDENT OF ACADEMIC AFFAIRS AND DEAN OF FACULTY Worcester Polytechnic Institute

Applications are invited for the position for Vice President of Academic Affairs and Dean of Faculty at Worcester Polytechnic Institute, an innovative College of Science and Engineering with an enrollment of 2500 undergraduate and 400 full-time graduate students, located in central Massachusetts.

Candidates should have an earned doctorate, a record of excellence in teaching/research/administration, proven academic leadership skills, excellent interpersonal skills, and a keen commitment to academic excellence. A candidate should be qualified to assume a tenured position in one of the College's programs.

The vice president for academic affairs and dean of faculty reports to the president and as chief academic officer of the College, is responsible for monitoring and recommending to the president academic appointments, the granting of tenure and promotion, and also the review, development and evaluation of academic policies, standards, and budget. Specific duties involve educational program development, budget management, and management of related academic activities.

Candidates should submit letter of application and curriculum vitae, together with the names of three references, to: **The Faculty Search Committee, Worcester Polytechnic Institute, Institute Road, Worcester, Mass. 01609, no later than 15 November 1983. Equal Opportunity/Affirmative Action Employer.**

Northeastern Ohio Universities College of Medicine invites applications and nominations for the position of **VICE PROVOST AND SENIOR ASSOCIATE DEAN**. The senior associate dean will be responsible for the academic affairs office of the College of Medicine, the administration of an established undergraduate core curriculum, and its further development and evaluation. As vice provost, the successful candidate will report to the provost/dean and will be in charge of the College of Medicine in the absence of the provost/dean. The major objective of the College of Medicine is the education of physicians for the practice of medicine with special emphasis on the training of primary care physicians. The College of Medicine, in consortium with The University of Akron, Kent State University, and Youngstown State University, offers a 6-year combined B.S./M.D. degree program. Clinical education takes place in the associated hospitals of Akron, Canton, and Youngstown, Ohio.

Requirements include the M.D. degree and extensive experience in medical school administration as well as qualification for a senior academic appointment.

Send curriculum vitae with list of references by 15 November 1983 to: **The Office of the Provost/Dean, Northeastern Ohio Universities College of Medicine, Rootstown, Ohio 44272. An Equal Opportunity/Affirmative Action Employer.**

REQUEST FOR PROPOSALS

CANCER RESEARCH INSTITUTE seeks applications for GRANTS AND FELLOWSHIPS in the field of CANCER IMMUNOLOGY

The next deadline for receipt of applications is 1 February 1984. For information, contact:

**Grant and Fellowship Coordinator
Cancer Research Institute, Inc.
133 East 58 Street
New York, N.Y. 10022
Telephone: 212-688-7515**

Lloyd J. Old, M.D., Medical Director

TRAINING PROGRAMS

POSTDOCTORAL TRAINING PROGRAM IN SLOW INFECTIONS

Applications are invited for advanced training in research in the molecular biology and protein chemistry of slow infections. The area of investigation involves the molecular structure of the scrapie agent or prion. A 27K protein, which is a component of the prion, has been identified. Studies include: (i) molecular characterization of the 27K prion protein (PrP); (ii) determination of the amino acid sequence; (iii) production of antibodies using synthetic polypeptides representing portions of PrP; (iv) reverse translation of PrP to produce oligonucleotide probes with which to search for the prion gene, and (v) search for a polynucleotide within the prion. Candidates should be U.S. citizens or permanent residents committed to a research career, hold a Ph.D., M.D., or D.V.M. degree, and have experience in molecular biology, biochemistry, immunology, virology, or neuropathology. Appointments, beginning immediately, are for 3 years with a salary ranging from \$14,040 to \$19,716. Applicants should include a short summary of research interests and background, curriculum vitae, and two letters of reference. Address applications to: **Stanley Prusiner, Neurology, M-794, University of California, San Francisco, Calif. 94143. The University of California, San Francisco, is an Affirmative Action/Equal Opportunity Employer.**

FELLOWSHIPS

C. H. BEST FOUNDATION POSTDOCTORAL FELLOWSHIP

In diabetes research, molecular endocrinology, molecular biology, differentiation, immunology, structure and function of membranes or lipid metabolism. Tenable for 2 years after 1 July 1984 with a competitive stipend. Available to new Ph.D.'s or candidates with fewer than 2 years of postdoctoral training by 30 June 1984. Send curriculum vitae, transcripts, and three letters of reference, preferably before 1 November 1983, to: **Dr. C.H. Siu, Search Committee Chairman, Banting and Best Department of Medical Research, University of Toronto, Toronto, Ontario, Canada M5G 1L6.**

THE HEBREW UNIVERSITY OF JERUSALEM Jerusalem, Israel

The Hebrew University of Jerusalem offers a small number of postdoctoral fellowships for the 1984-1985 academic year in the humanities, social sciences, natural sciences, agriculture, and medicine.

Candidates may apply at an early stage of their professional career (not later than 3 years after completion of their doctoral dissertation) to: **P.O. Box 1255, Jerusalem 91904, Israel.**

Completed application forms must be returned by 1 December 1983.

FELLOWSHIPS

CLINICIAN-INVESTIGATOR TRAINING PROGRAM

The Mayo Graduate School of Medicine now offers a combined research and clinical curriculum for those wishing to prepare for academic careers as independent clinician-investigators in the fields of internal medicine, dermatology, pathology, orthopedics, and otorhinolaryngology.

The program includes:

- 1) Graduate level courses and seminars in the basic sciences (for example, cell biology, molecular biology, immunology, and so forth).
- 2) Clinical training leading to specialty/sub-specialty board eligibility.
- 3) Research experience in the laboratories of established investigators to develop a foundation for independent research.



Applications may be obtained from:

**Mayo Graduate School of
Medicine
200 First Street, SW
Rochester, Minnesota 55905**

POSTDOCTORAL FELLOWSHIPS IN REPRODUCTIVE BIOLOGY: Postdoctoral fellowships are available in an NIH-funded training program. Research areas include: biochemistry and cell biology of fertilization (S. Meizel, J. Hedrick, D. Katz, R. Nuccitelli) and cell biology and morphology of implantation, placenta, and early development (A. Enders, A. Hendrickx, B. King). Candidates must be U.S. citizens or permanent residents, and at time of appointment, must have doctoral degree with either no postdoctoral training or less than 1 year. Appointments can begin any time before 2 July 1984. Applicants should send their curriculum vitae, summary of research interests, and three letters of recommendation to: **Dr. Stanley Meizel, Department of Human Anatomy, School of Medicine, University of California, Davis, Davis, California 95616. The University of California is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available to study the enzymology of lignin degradation by white rot fungi [see *Biochem. Biophys. Res. Commun.* 114, 1077 (1983)]. Recent Ph.D. with experience in biochemistry and/or molecular biology preferred. Send résumé, including names of three references, to: **Dr. Michael H. Gold, Department of Chemistry and Biochemical Sciences, Oregon Graduate Center, 19600 Northwest Walker Road, Beaverton, Oregon 97006. Equal Opportunity/Affirmative Action Employer.**

IMMUNODIAGNOSTICS

Becton Dickinson Postdoctoral Fellowship

POSTDOCTORAL POSITION available immediately to study, evaluate, and participate in the development of novel nonisotopic immunoassay technology. Recent Ph.D. in organic chemistry, with good biochemical techniques or recent Ph.D. in biochemistry with good knowledge in organic synthesis will be considered. Salary: \$20,000 per year and a relocation allowance. This assignment will be at the Becton Dickinson and Company Research Center in North Carolina's Research Triangle Park. Send curriculum vitae, a description of your research interests, and the names of three references to: **Dr. Daniel B. Wagner, Becton Dickinson and Company Research Center, P.O. Box 12016, Research Triangle Park, North Carolina 27709.**

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MARKET PLACE

CONSULTANTS—All fields. Individual or company. Get national exposure through EXPERTISE ONLINE. Enter your profile in this online database for a full year for as little as \$40. For information write The ERICA Corporation, 14905, Talking Rock Court, Gaithersburg, Md 20878.

POSTDOCTORAL RESEARCH APPOINTMENTS

The Life Sciences Division at The Los Alamos National Laboratory has postdoctoral positions available in the areas of membrane and protein chemistry, cyclic nucleotide biochemistry and enzymology, and neurochemistry. These positions offer excellent opportunities for interaction with outstanding molecular and theoretical biologists and biophysicists.

The Laboratory is operated by the University of California for the Department of Energy. Appointments are for one year, renewable for a second year and pay a stipend amount of \$26,220 to \$27,600 per annum (depending on research experience). We provide incoming travel, moving expenses and a full-range of employee benefits. Candidates no more than three years past their Ph.D. are invited to apply.

For information, call Mark Bitensky at (505) 667-2690.

To apply, please send **curriculum vitae**, statement of research interests, and the names of three references to:

Madeline Lucas
Personnel Services, DIV 83-BB
Los Alamos National Laboratory
Los Alamos, NM 87545

University of California

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

*An Affirmative Action/Equal Opportunity Employer:
Women, Minorities, Handicapped and Veterans
are urged to apply.*

Pulmonary Physiologist and Biochemist

Pfizer Central Research has two openings for Ph.D. scientists in the Department of Immunology and Infectious Disease. These positions are part of a drug discovery project team investigating the pathophysiology of asthma and other hypersensitive disease states.

Qualified candidates must have a Ph.D. in Biochemistry, Immunology or Physiology and a minimum of two years postdoctoral experience. A background in the area of animal models of pulmonary disease and/or the role of bioactive lipids as mediators of the disease process is essential. A publication record indicative of the ability to perform creative, independent research is desirable.

This position offers an excellent opportunity for professional recognition and career growth. We also offer competitive compensation, benefit package and the opportunity to live in an attractive Connecticut shore community. Please send resume and a brief description of research interests to: Jerry K. Larson, Ph.D., Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, Connecticut 06340.



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opportunity employer

DIRECTOR, NATIONAL LIBRARY OF MEDICINE

NATIONAL INSTITUTES OF HEALTH
PUBLIC HEALTH SERVICE
DEPARTMENT OF HEALTH AND HUMAN SERVICES

The National Institutes of Health invites nominations and applications for the position of Director, National Library of Medicine (NLM). The Director, NLM, provides leadership to an organization that is responsible for fostering the advancement of medical and related sciences through the collection, dissemination and exchange of information important to the progress of medicine and health.

This is a Civil Service position in the Senior Executive Service (SES), with an authorized salary range from \$56,945 to \$63,800 per annum depending on qualifications. Candidates may be eligible for Physicians Comparability Allowance up to \$10,000 per year. Alternately, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service. The SES individual selected, if not presently in the SES, must serve a one-year probationary period.

Candidates must meet the minimum educational requirements for Medical Officer, GS-602, of Health Scientist Administrator, GS-601, as defined by the U.S. Office of Personnel Management Handbook X-118—Qualification Standards for Positions Under the General Schedule, which is available in Federal Personnel Offices and Federal Job Information Centers; and must have demonstrated interest

and/or experience in biomedical communications in support of research investigators, educators, and practitioners.

Candidates will be further evaluated by the Search Committee on the following desirable factors: scientific recognition/peer recognition; managerial/executive qualifications; communications and interpersonal skills; education, training, and experience; and honors and awards. Information on any of the above requirements may be obtained by calling Mrs. Helen C. Stafford at (301) 496-4197 and requesting a formal vacancy announcement.

Applications (Personal Qualifications Statement, SF-171) are to be sent to Helen C. Stafford, Executive Secretary, Search Committee for Director, NLM, National Institutes of Health, Building 1, Room 19, Bethesda, Maryland 20205. A current curriculum vitae and bibliography must accompany all applications. Applications of women and/or minority group members are especially solicited.

Opening Date: 9/7/83. All applications must be postmarked before Closing Date: 11/30/83.

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1983 AAAS Westinghouse Science Journalism Awards

Rules

The aim of this competition is to encourage and recognize outstanding reporting on the sciences and their engineering and technological applications in newspapers, general circulation magazines, radio, and television. The following categories are not eligible: items on the field of medicine, items published originally in AAAS publications or produced by AAAS; reports by employees of the AAAS or Westinghouse Electric Corporation.

Print

- An entry for a newspaper competition may be any of the following: a single story; a series of articles; or a group of three unrelated stories, articles, editorials, or columns published during the contest year. A magazine entry may be a single story or series published during the contest year.

- A completed entry blank must be submitted together with seven copies of each entry in the form of tear sheets, clippings, reprints, or syndicate copy (not over 8½" x 11"), showing name and date of the publication. **ENTRIES MUST NOT BE ELABORATE!**

Broadcast

- An entry for the radio or television competition may be an individual news story, feature, or a series, regardless of length, broadcast during the contest year on either public or commercial stations. Entries must be comprised of scripted material. Interviews are not eligible.

- A completed entry blank must be submitted together with a cassette in the case of radio and copy of the script or a ¾" videocassette in the case of television and copy of the script.

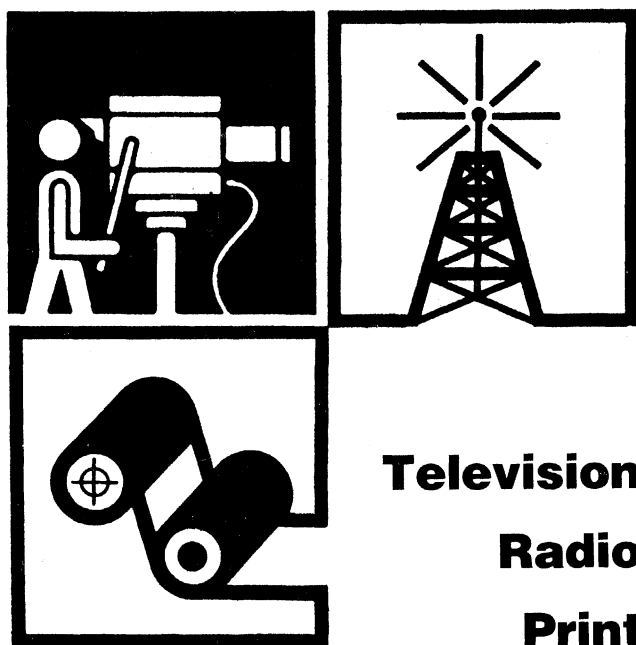
- Each entrant may submit three entries for any one category.
- Each entry must have been published or produced and broadcast within the United States during the contest year—**1 January 1983 through 31 December 1983**. (In case of a series, more than half of the items comprising it must have been published or broadcast during the contest year.) The date on the issue in which an article appears will be considered as the date of publication. All entries must be postmarked on or before midnight, 15 January 1984.

- Persons other than the author may submit entries in accordance with these rules. Entries will not be returned.

- Winners of the 1982 awards are not eligible for the 1983 awards. Persons winning three times are no longer eligible.

- The Judging Committees, whose decisions are final, will choose the winners. There are five awards of \$1,000: for the winning entry in the over 100,000 daily circulation newspapers competition; for the winning entry in the under 100,000 circulation newspapers competition; for the winning entry in the general circulation magazine competition; for the winning entry in the radio competition; and for the winning entry in the television competition. For award purposes, newspaper circulation will be sworn ABC daily circulation as of 30 September 1982. The Judging Committees may cite other entries for honorable mention.

- The awards will be presented at the dinner meeting of the National Association of Science Writers during the Annual Meeting of the American Association for the Advancement of Science in New York City in May 1984. Travel and hotel expenses of the award winners will be paid. **Entrants agree that, if they win, they will be present to receive their awards, unless prevented by circumstances beyond their control.**



Television
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Print

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