

(18,000 years ago) by a few thousand years.

The Canadian contributions to the volume are not so comprehensive, consisting of a general chapter and three short summaries for the eastern, western, and arctic sectors, but here also the evidence for glaciation prior to the Late Wisconsin is included, although the inadequate dating control makes a correlation chart impractical.

Europe is treated in two papers for Scandinavia; two for the British Isles; six for the Netherlands, Germany, and eastern Europe; two for northern and central France; five for the Alps, Carpathians, and Pyrenees; one for Corsica; and one for a summation. In Norway, Sweden, and Finland recent research has revealed a record not only of the last interglacial (Eemian) but also of Weichselian interstadial deposits that are correlated with the complex Weichselian stratigraphy of Denmark and the North European plain on the basis of radiocarbon dates and pollen analyses. For the Late Weichselian in Scandinavia, new ideas on the pattern and chronology of glaciation are summarized by Lundqvist, with numerous maps and diagrams.

For England, Ireland, Scotland, and Wales, the wealth of recent research (almost 500 references are cited) is summarized in separate sections, including extensive reference to early and middle Pleistocene events. Unfortunately radiometric dating and related techniques provide little control for time prior to the radiocarbon range, and even paleomagnetic-reversal chronology has not been applicable. The classification of glacial units is largely based on biostratigraphic correlations with the better-defined sequences in the Netherlands. Accordingly no comparison with the oceanic stratigraphy is feasible.

Most of the other European chapters are brief. In Poland the application of thermoluminescence dating provides a chronology to 788,000 years ago covering 11 glacial units correlated with marine oxygen-isotope stratigraphy back to stage 20. Here and elsewhere in Europe the paleobotanical record is sufficiently detailed to permit correlation of interglacial and even interstadial deposits on the basis of pollen stratigraphy and floristics—techniques not used in any American studies.

Of special interest is the loess stratigraphy of Lower Austria, in which the overlapping Stranzendorf and Krems sections with their multiple paleosols span the entire Quaternary back to the Gauss/Matuyama paleomagnetic reversal (2,840,000 years ago). Micromammal evolution provides support for correlation of the overlap of the two sections. Relations of the loess stratigraphy to the

classical Günz/Mindel/Riss/Würm sequence of Alpine glaciation are uncertain, however, and in the summation for Europe no real attempt is made to correlate the Alpine glacial intervals with the complex glacial sequence of northern Europe, where the classical pre-Eemian glacial intervals (Saale, Elster) are now subdivided numerous times in an attempt to match the last 22 glacial/interglacial phases of the marine record.

The paper on Soviet Europe by Velichko and Faustova is packed with descriptions, tables, and stratigraphic sections. Correlations for the older glacial phases as presented in a large table in the text are based largely on fossil plants and both large and small mammals in interglacial deposits, especially their extirpations and evolutionary trends. For Siberia, thermoluminescence dating provides a basis for subdividing the earlier Pleistocene back to 630,000 years ago. A summary chapter shows in a table the correlations between eastern Europe, Siberia, and the northeastern U.S.S.R. and presents a map that shows the glacial limits of the various main stages over the entire country, indicating both the minimum version for the last glaciation and the maximum version, in which the ice sheets of northwestern Siberia were confluent and blocked the major north-flowing rivers to create a great proglacial lake that drained south to the Caspian Sea and thence to the Mediterranean.

For Americans in particular this impressive volume provides a convenient entry to the recent Quaternary research in Eurasia, which is proceeding at a rate equal to that in this country. The approach throughout is geared towards establishing correlations among regions in order to build up a grand chronology. This has always been the aim of much of Quaternary research, but the impetus to pursue it in greater detail has come from, first, the firm establishment of a master glacial chronology based on marine oxygen-isotope stratigraphy, so that the old quadripartite subdivision of the Pleistocene could no longer be valid, and, second, the development of new dating techniques in addition to radiocarbon analysis, for example paleomagnetism, thermoluminescence, K-Ar dating of volcanics, and the analysis of micromammalian evolutionary trends, so that the early and middle Pleistocene could be studied and correlated more objectively. Certainly the last word has not been presented on these problems, or on the terminology, but this volume should be a milestone in the history of Quaternary research.

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Books Received

Alternative Energy Sources VII. T. Nejat Veziroglu, Ed. Vol. 1, Solar Energy 1. xvi, 526 pp., illus. \$116. Vol. 2, Solar Energy 2. xvi, 598 pp., illus. \$116. Vol. 3, Indirect Solar/Nuclear. xvi, 552 pp., illus. \$116. Vol. 4, Bioconversion/Hydrogen. xvi, 550 pp., illus. \$116. Vol. 5, Hydrocarbons/Energy Transfer. xvi, 610 pp., illus. \$116. Vol. 6, Energy Economics and Planning. xvi, 653 pp., illus. \$116. Hemisphere (Harper and Row), New York, 1987. From a conference, Miami, Dec. 1985.

America's Health in the Balance. Choice or Chance? Howard H. Hiatt. Harper and Row, New York, 1987. xviii, 253 pp. \$18.95.

Animal Intelligence. Insights into the Animal Mind. R. J. Hoage and Larry Goldman, Eds. Smithsonian Institution Press, Washington, DC, 1986. 207 pp., illus. Paper, \$10.95.

The Birth of the Earth. A *Wanderlied* Through Space, Time, and the Human Imagination. David E. Fisher. Columbia University Press, New York, 1987. xiv, 270 pp., illus. \$24.95.

Cellular Endocrinology. Hormonal Control of Embryonic and Cellular Differentiation. Ginette Serrero and Jun Hayashi, Eds. Liss, New York, 1986. xviii, 481 pp., illus. \$78. Progress in Clinical and Biological Research, vol. 226. From a symposium, Lake Placid, NY, Aug. 1985.

Cerebral Lateralization. Biological Mechanisms, Associations, and Pathology. Norman Geschwind and Albert M. Galaburda. MIT Press, Cambridge, MA, 1987. xii, 283 pp., illus. A Bradford Book. Reprinted in part from *Archives of Neurology*, vol. 42 (1985).

Dietary Fat and Cancer. Clement Ip *et al.*, Eds. Liss, New York, 1986. xvi, 885 pp., illus. \$130. Progress in Clinical and Biological Research, vol. 222.

Differential Gene Expression and Plant Development. C. J. Leaver *et al.*, Eds. Royal Society, London, 1986. viii, 158 pp., illus. Paper, £28.75. From a meeting, London, April 1986. Reprinted from *Philosophical Transactions of the Royal Society of London*, series B, vol. 314, no. 1166, pp. 341–500.

Earth. Anne H. Ehrlich and Paul R. Ehrlich. Watts, New York, 1987. 258 pp., illus. \$19.95.

Ecce Homo. An Annotated Bibliographic History of Physical Anthropology. Frank Spencer, compiler. Greenwood, Westport, CT, 1986. xvi, 496 pp., illus. \$49.95. Bibliographies and Indexes in Anthropology, no. 2.

Ecology and Design in Landscape. A. D. Bradshaw, D. A. Goode, and E. H. P. Thorp, Eds. Blackwell Scientific, Palo Alto, CA, 1986. x, 463 pp., illus. \$90. From a symposium, Manchester, U.K., Sept. 1983.

Introduction to the Theory of Nonlinear Elliptic Equations. Jindřich Nečas. Wiley-Interscience, New York, 1986. 164 pp. \$29.95.

An Introduction to the Theory of Surreal Numbers. Harry Gonshor. Cambridge University Press, New York, 1986. vi, 192 pp. Paper, \$19.95. London Mathematical Society Lecture Note Series 110.

Invertebrate Zoology. Robert D. Barnes. 5th ed. Saunders, Philadelphia, 1986. x, 893 pp., illus. \$33. Saunders Series in Organismic Biology.

Judgment and Decision Making. An Interdisciplinary Reader. Hal R. Arkes and Kenneth R. Hammond, Eds. Cambridge University Press, New York, 1986. xiv, 812 pp., illus. \$59.90; paper, \$21.95.

Knowth and the Passage-Tombs of Ireland. George Eogan. Thames and Hudson, New York, 1987. 247 pp., illus. \$29.95. New Aspects of Antiquity.

A Laboratory Manual of Neuroanatomy. D. T. W. Yew and M. I. Chuah. World Scientific, Singapore, 1986 (U.S. distributor, Taylor and Francis, New York). x, 91 pp., illus. \$21.

The Mechanical Factors of Digestion. Walter B. Cannon. Introduction by Horace W. Davenport. Science History (Watson), Canton, MA, 1987. xxiv, 195 pp., illus. Reprint, 1911 ed.

Medical Physics. Selected Reprints. Russell K. Hobbie, Ed. American Association of Physics Teachers, College Park, MD, 1986. ii, 141 pp., illus. Paper, \$10.

Medicinal Plants of Native America. Daniel E. Moerman. University of Michigan Museum of Anthropology, Ann Arbor, 1986. Two volumes. xxii, 910 pp. Paper, \$30. Museum of Anthropology Technical Reports, no. 19. Research Reports in Ethnobotany, contribution 2.

Mediterranean Marine Avifauna. Population Studies and Conservation. MEDMARAVIS and Xaver Monbailiu, Eds. Springer-Verlag, New York, 1986. xx, 535 pp., illus. \$136.40. NATO Advanced Science Institutes Series G, vol. 12. From a workshop, Alghero, Sardinia, March 1986.

Products & Materials

Fermentation System

The MEMBROFERM is a multichambered fermentation system for culturing cells, microorganisms, and enzyme-transformed substances. Cells may be kept separate from the medium and from the cell product. Any of several types of membranes may separate the chambers. Cells may be cultured in suspension or surface-attached. The MEMBROFERM comes with all necessary control systems and instruments and may be interfaced with a computer. Sulzer Biotech Systems. Circle 650.

Automated Benchtop Mass Spectrometer

The ANA/MS System is a compact dedicated ^{15}N and ^{13}C isotope ratio mass spectrometer. The portable system analyzes 12 samples per hour by means of the Dumas combustion method with no Kjeldahl preparation needed. An automatic turbomolecular pumped vacuum system and a capillary interface with automatic shutoff protect against accidental analyzer overpressure. An IBM PC, XT, or AT and a software package drive the system, accept signal input from the analyzer, and calculate both percentages of and total ^{13}C and ^{15}N . Isotec. Circle 652.

Molecular Graphics Program for PCs

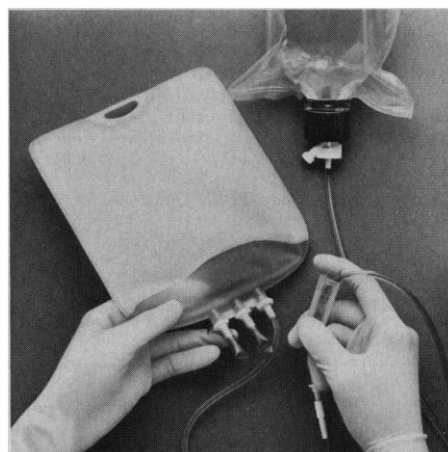
Promodeler I 2.0 is a menu- and mouse-driven graphics program for display and manipulation of models of proteins and nucleic acids. As many as 5000 atoms may be displayed at once. Molecules may be represented with shaded spaces drawn, all bonds drawn, or only bonds between backbone α carbons drawn. In bond or backbone representation, a molecule may be rotated, translated, and scaled at a rate of approximately 1 to 3 seconds per position. The system can create stereopairs of both space-filling and bond representations. The user may color all or part of the molecule; the menu includes predefined color schemes to enhance backbones, certain atom types, or

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side-chain hydrophobicity. Molecule structures must be either from the Brookhaven Protein Data Bank or from files with the same format. Promodeler I 2.0 requires an IBM AT or equivalent computer with a math coprocessor, hard disk, at least 512 kilobytes of memory, and the IBM Professional Graphics adapter and display. New England BioGraphics. Circle 653.

Gas-Permeable Tissue Culture Flask

The LIFECELL tissue culture flask is made of a flexible but sturdy soft plastic that is permeable to oxygen and carbon dioxide but not to microorganisms. This reduces contamination, helps maintain the pH, and extends cell viability. The fluid path is ster-



ile, nonpyrogenic, and biocompatible. No special roller or stirring is required with the LIFECELL flask. The flasks are available in two sizes—50 to 150 ml and 100 to 500 ml—and may be used as seed vessels or to grow as much as a gram of protein. Fenwal Laboratories. Circle 636.

Chromatography Work Station

CHROMAC is a hardware and software system that acquires, processes, and plots on the screen data from as many as four liquid chromatography, high-performance liquid chromatography, gas chromatography, or ion chromatography instruments. The software is designed to allow easy transfer of data to database, spread-sheet, word processing, and graphics programs. Other features include both manual and automatic analysis of area percentages, internal and external standards, multipoint calibration, and interactive screen displays. CHROM-PAC operates on Macintosh computers. Drew Scientific. Circle 659.

Spectrophotometer Software

DU Data Leader software captures data from Beckman DU spectrophotometers and graphically displays them. The results of mathematical manipulations of the data are instantly displayed on the monitor; hard copy may also be produced. Features include audit trails, macros, pop-up windows, and compatibility with Lotus 1-2-3. Stored data may be recalled at any time for comparison or manipulation. Data files from spectrophotometers in different locations may be displayed together. DU Data Leader operates on the IBM PC. Beckman Instruments, Bioanalytical Systems Group. Circle 661.

Interpretative Densitometer

The MasterScan interprets separation images from one- and two-dimensional gel electrophoretograms and thin-layer chromatograms. First, it scans and digitizes the image. Then, the image is transformed to correct background and migration irregularities and is compared to stored signatures to identify the analyte. Finally, the analyte concentration is computed with the aid of stored multipoint calibration curves. CSP. Circle 664.

Literature

Protein & Cell Purification Products is a bulletin explaining how radial flow columns can improve production rates in immunoaffinity, ion-exchange, hydrophobic, and high-pressure liquid chromatography separations. New Brunswick Scientific. Circle 665.

Bibliography: Fabry-Perot Interferometry references more than 200 papers concerning applications of Fabry-Perot Interferometry. Burleigh Instruments. Circle 666.

The Video E/CTF 188 Flame/Furnace AA Systems is an eight-page brochure about an automated furnace atomizer. Thermo Jarrell Ash. Circle 525.

BMBI is a catalog of biochemicals that also contains a review of glycoprotein biosynthesis. Boehringer Mannheim Biochemicals. Circle 526.

High Performance Data Acquisition Without Programming describes mouse- and menu-driven data acquisition software for the UNIX operating system. MASSCOMP. Circle 527.

Precast Mini Gels is a brochure about linear density-gradient polyacrylamide gels designed to fit mini electrophoresis units. Jule, Biotechnology Division. Circle 529.

Personnel Placement

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

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

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

6/19, 26; 7/3

Pathologist, M.D. (1980). Certified AP/CP with strong interest in comparative pathology. Experienced in surgical pathology, electron microscopy, and microbiology. Seeks challenging position in comparative medicine in research/industry. Available July 1988. Box 88, SCIENCE.

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The Alexander Silberman Institute of Life Sciences is seeking candidates for the following tenure-track positions:

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Rank/salary according to qualifications. Send curriculum vitae, list of publications, representative papers, and have three letters of reference sent to: **Professor A. Loyter, Chairman, The Institute of Life Sciences, The Hebrew University of Jerusalem, 91904 Israel**, before 1 November 1987.

PRINCETON UNIVERSITY, Psychology Department: The Department anticipates the possibility of making one or more appointments at the **ASSISTANT PROFESSOR** level in the fields of social-personality, cognitive psychology including perception and information processing, and/or behavioral neuroscience. Candidates who combine an interest in quantitative methods or research methodology with one or more of the above-mentioned fields are especially encouraged to apply. We are interested in candidates whose research interests coincide with those of our current faculty and who are also interested in bringing new research skills and directions as well. Candidates should have a commitment to teaching at both the graduate and the undergraduate levels, and are expected to be committed to an active research program. Applicants are asked to submit curriculum vitae and three letters of reference to: **The Search Committee, Department of Psychology, Green Hall, Princeton University, Princeton, NJ 08544.** Deadline for applications is 31 October 1987. *Princeton University is an Equal Opportunity/Affirmative Action Employer.*

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Applications are invited for appointment to a tenure-track position as assistant professor of anatomy at the Medical College of Virginia of Virginia Commonwealth University. Salary will depend on qualifications and experience. Candidates should have 2 years or more of postdoctoral research training; and preference will be given to applicants with research experience in immunobiology, although those with experience in neurobiology and/or reproductive biology also will be considered. Applicants should have both an active research program with a high potential for attracting external funding and promise of ability as a teacher of gross anatomy and/or histology and cell biology at the professional school and graduate level. Deadline for receipt of applications is 1 September 1987, or until identification of a suitable candidate, for appointment effective 1 January 1988. Please send curriculum vitae, the names of three references, and a description of current research interests and expertise to: **Dr. W. P. Jollie, Professor and Chairman, Department of Anatomy, Medical College of Virginia, Virginia Commonwealth University, Box 709 MCV Station, Richmond, VA 23298-0709.** *Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

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Qualified candidates should have a Ph.D. in biochemistry or pharmacology and up to four years' relevant experience in a laboratory setting. In addition, the preferred candidate will have an understanding of the use of biochemical data in the risk assessment process and training in in vivo mammalian metabolic studies, pharmacokinetics and radiochemical techniques.

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We offer a stimulating work environment with a competitive compensation and benefits package. For prompt consideration, please submit your curriculum vitae and names of three references to: California Biotechnology Inc., Human Resources, Dept. MF-JA, 2450 Bayshore Parkway, Mountain View, CA 94043. An equal opportunity employer.

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BARNES-HIND INC.

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The University of Maryland Libraries in College Park invites nominations and applications for a newly developed bibliographer position. The position will be responsible for developing library collections to support campus curricula, teaching, and research in: mathematics, computer science, chemistry, astronomy, physics, geology, transportation studies, meteorology, and engineering. Nature of collection development includes: analysis of collections for strengths and weaknesses; formulation and application of collecting policies; monitoring of expenditures; developing and maintaining close working relationships with faculty and other users, with the book trade world, and with other Library employees. **QUALIFICATIONS:** *Required:* M.L.S. from ALA-accredited program. Minimum of 1 year of experience in collection development. Degree in one of the following subject areas: mathematics, computer science, chemistry, astronomy, physics, geology, transportation studies, meteorology, and engineering. Working knowledge of one of the following languages: French, German, Italian, or Russian. Preferred: collection development experience in ARL library including collection analysis, collection development policy formulation and applications; work experience in dealing with the book trade world; demonstrated ability to interact effectively with library staff and diverse clientele, and ability to communicate effectively in oral and written form. **SALARY:** \$21,428 minimum. Salary commensurate with experience. Excellent benefits. For full consideration, submit résumé and names/addresses of three references by 30 June 1987, to: **Virginia Sojehci, Personnel Librarian, McKeldin Library, University of Maryland, College Park, MD 20742.** *Affirmative Action/Equal Opportunity Employer.*

BIOCHEMIST/SENIOR RESEARCH TECHNICIAN: Prepare cryoprecipitate from human blood plasma. Purify antihemophilic factor from cryoprecipitate by polyelectrolyte chromatography and immunoaffinity chromatography. Prepare affinity adsorbents by chemical activation of solid-phase carbohydrates using various organic reagents. Perform covalent coupling of proteins to activated supports. Prepare antibodies to human plasma proteins by injection of protein samples into rabbits and mice. Assay human blood coagulation factors especially antihemophilic factor. Perform chemical modification of purified antihemophilic factor, molecular weight determinations, protein concentration assays, purification of von Willebrand factor from human blood plasma, and enzyme-linked immunoassay of antihemophilic factor. Supervise and train technical staff. Have knowledge of safety precautions to prevent contamination by hepatitis virus or HTLV-III AIDS-related virus when handling human blood plasma. Forty hours per week, \$21,600 per year. Bachelor of Science degree in biochemistry, 2 years of experience. **JO #NY8022689.** DOT Code 041061026. Mail résumé to: **NYS Job Service, 259 Schermerhorn Street, 3rd floor, Brooklyn, NY 11201.**

BIOLOGIST needed to teach mammalogy and ornithology academic year 1987/88. Full-time, temporary position may be split between Departments of Biological Sciences and Wildlife. Salary \$25,800 to \$31,000 for 9 months. Ph.D. or near completion in appropriate field required. Start 24 August 1987. Send résumé, reprints, three reference letters by 15 July 1987 to: **Dr. M. J. Boyd, Chairman, Department of Biological Sciences, Humboldt State University, Arcata, CA 95521; telephone: 707-826-3245.** *An Equal Opportunity Employer.*

BIOLOGY—One-year appointment to teach animal physiology, embryology, histology, microbiology, and general biology. Fall term in Arkadelphia and spring term in Little Rock. Ph.D. preferred. Contact: **Dr. P. R. Dorris, HSU Box 7544, Arkadelphia, AR 71923; telephone: 501-246-5511, extension 3207.** *Henderson State University is an Equal Opportunity/Affirmative Action Employer.* Selection begins 1 July 1987.

POSITIONS OPEN

BIOLOGICAL OCEANOGRAPHER UNIVERSITY OF CALIFORNIA, SANTA BARBARA

The Department of Biological Sciences, University of California, Santa Barbara, invites applications for an anticipated tenure-track position at the assistant professor level in biological oceanography, effective 1 July 1988. Exceptionally strong candidates may be considered at the tenured level. Salary and rank are dependent on qualifications. Applicants should have research programs which investigate the relationship between the physical or chemical environment and the biology of marine organisms in the water column. In addition to establishing a strong research program, the successful applicant will be expected to teach the physical processes portion of the required course for undergraduate aquatic biology majors, establish an additional course at the undergraduate or graduate level, and interact with the broad spectrum of marine scientists associated with the Department of Biological Sciences and the Marine Science Institute. A Ph.D. is normally required by the time of appointment. Interested individuals should send a copy of their curriculum vitae, a brief summary of their research goals, and names of three references to: **The Chairperson; Department of Biological Sciences; University of California; Santa Barbara, CA 93106,** by 1 October 1987. *An Equal Opportunity/Affirmative Action Employer. Proof of U.S. citizenship or eligibility for U.S. employment will be required prior to employment (Immigration Reform and Control Act of 1986).*

CHAIR, DIVISION OF ENTOMOLOGY COLLEGE OF AGRICULTURE UNIVERSITY OF IDAHO MOSCOW, IDAHO

The Department of Plant, Soil, and Entomological Sciences invites applications and nominations for the position of Chair, Division of Entomology (50% administration/50% research-teaching). The Entomology Division is one of four divisions within the Department. The Division Chair will be directly responsible to the Department Head for administrative duties pertaining to all Division operations, including budget management, and faculty and staff evaluations. The Chair will be expected to participate in undergraduate and/or graduate level teaching and to develop and maintain an active research program in pest management of arthropods of agricultural or livestock importance. Applicants must have a Ph.D. in entomology, experience with arthropods of importance to agriculture or livestock, outstanding scholarly and professional record, demonstrated excellence in classroom instruction and research, and evidence of administrative aptitude. Land Grant University experience and an appreciation for the importance of both basic and applied research to the discipline are desirable. Applicants should submit a letter of application, curriculum vitae, and four letters of recommendation to: **Dr. Merlyn A. Brusven, Chairman, Search Committee, Department of Plant, Soil, and Entomological Sciences, University of Idaho, Moscow, ID 83843; telephone: 208-885-7540.** Screening of applicants will begin 24 July 1987 and will continue until a suitable applicant is identified. *An Affirmative Action/Equal Opportunity Employer.*

CHEMICAL OCEANOGRAPHER BROOKHAVEN NATIONAL LABORATORY

The Oceanographic Sciences Division invites applications from scientists with a recent Ph.D. for a staff position in chemical oceanography. The appointment is initially for 2 years, effective 1 September 1987. The desired specialty is a descriptive chemical oceanographer with a background in automated nutrient analyses. The successful candidate would be expected to continue an ongoing field program of measuring plant nutrients and develop new programs. The successful candidate will join a multidisciplinary research group now investigating the production, transport, and cycling of materials on continental shelves. The rank and salary of the appointee will be commensurate with education, training, and experience. Applications should include curriculum vitae with names, addresses, and telephone numbers of three references, and should be submitted before 15 July 1987 to: **Dr. Creighton D. Wirick, Chair, Search Committee, Oceanographic Sciences Division, Building 318, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, NY 11973.** *Brookhaven National Laboratory is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CHAIRPERSON AND PROFESSOR FOOD SCIENCE AND HUMAN NUTRITION DEPARTMENT UNIVERSITY OF FLORIDA

The Food Science and Human Nutrition Department, a unit of the Institute of Food and Agricultural Sciences, is seeking an individual to serve as Chairperson. The Department has 30 faculty who are responsible for research, teaching, and extension programs in food science, nutritional sciences, dietetics, and toxicology. Instructional activity involves both undergraduate education and graduate training through the Ph.D. degree. Candidates must have an earned doctorate in food science, nutritional science, toxicology, or a closely related discipline and demonstrated professional leadership with the ability to attract extramural funding. Qualifications include a commitment to departmental administrative affairs and the ability to communicate effectively with the faculty, university administration, and the public. A résumé documenting academic training, professional experience and scholarly publications, and the names of five references must be submitted by 31 August 1987, to: **Dr. Jesse F. Gregory, Chairman, Search and Screen Committee, Food Science and Human Nutrition Department, University of Florida, Gainesville, FL 32611. Telephone: 904-392-1991.**

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

CLINICAL VIROLOGY DIRECTOR

The Children's Hospital of Philadelphia is seeking an individual to fill a new position as associate director of the Diagnostic Virology Laboratory. The Viral Laboratory is a large, urban-based, state-of-the-art laboratory which employs eight medical technologists, a technical supervisor, and a director. The new position will include involvement in the daily running of the laboratory, evaluation and implementation of recently developed tests, and development work for new methods for viral diagnosis. Qualifications include a Ph.D. degree in microbiology or virology with specialized training in clinical virology. *Equal Opportunity/Affirmative Action Employer.* Applicants should send curriculum vitae and the names of three professional references to: **Harvey M. Friedman, M.D., Director, Clinical Virology Laboratory, Children's Hospital of Philadelphia, 34th and Civic Center Boulevard, Philadelphia, PA 19104.**

COMPUTER PROGRAMMER. Immediate opening at the University of Virginia, Charlottesville, Virginia, for a computer programmer with a background in image processing who will be responsible for developing algorithms for cardiac imaging analysis using a kontron system with an array processor interfaced to a VAX 8200. Additional interface to SUN-3 workstation/MICROVAX II possible. Experience with FORTRAN-77 required. Salary and faculty status negotiable. Reply to: **Sanjiv Kaul, M.D., Box 158, Division of Cardiology, University of Virginia, Charlottesville, VA 22908. Telephone: 804-924-5928.** *The University of Virginia is an Equal Opportunity/Affirmative Action Employer.*

DENTAL DIAGNOSTIC SCIENCE CHAIRPERSON—TEXAS

A search has been initiated for the position of chairperson. The scope of departmental activity includes oral diagnosis, oral medicine, treatment planning, dental and maxillofacial radiology, forensic dentistry, geriatric dentistry, service functions in support of other programs, and patient procurement for dental students. An active graduate program exists which accepts four students per year.

The Search Committee wishes to identify candidates with a strong dental background in administrative leadership, teaching accomplishment, and research. An intramural practice opportunity exists. The school has extensive facilities for clinical testing and a developed clinical research program. The Dental School is an integral part of The University of Texas Health Science Center at San Antonio which additionally includes schools of Medicine, Nursing, Allied Health Sciences, and a Graduate School of Biomedical Science. *Equal Opportunity/Affirmative Action Employer.* Send nominations or curriculum vitae by 1 October 1987 to: **Dr. Hugh B. Tilson, Chairman Search Committee, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284-7917.**

UNIVERSITY OF MASSACHUSETTS

DIRECTOR, GRADUATE PROGRAM IN NEUROSCIENCE AND BEHAVIOR

The University of Massachusetts at Amherst has opened a search for the Director of the new interdepartmental graduate program in Neuroscience and Behavior, now in its second year of operation. The membership of the Program includes 21 core faculty from the Departments of Psychology, Zoology, Computer and Information Sciences, Biochemistry, and Microbiology, as well as affiliated faculty at the University and at Amherst, Mount Holyoke, and Smith Colleges. Applicants should have a strong commitment to graduate education, a distinguished record of research accomplishment, and a position of leadership in an area of neuroscience or behavior. The successful candidate will be expected to ensure the excellence of the graduate training program, to assist in the planning and development of common research facilities, to participate actively in the recruitment of new faculty members, and to foster collaboration with other departments and programs in the university. Funding is available for graduate assistantships, support staff, equipment, and other program activities. Space and facilities will be provided for the candidate's own research group. Appointment will be made at the senior faculty level, preferably in affiliation with the Zoology Department. Salary will be commensurate with qualifications and experience. The position will be available September 1, 1988. Applications or nominations including the candidate's curriculum vitae, a current list of publications, and the names of three referees, should be sent to: **NSB Director Search, Neuroscience and Behavior Program, Morrill Science Center, University of Massachusetts, Amherst, MA 01003; telephone 413-545-2046.** Applications will be accepted until September 15, 1987, or until the position is filled. *The University of Massachusetts is an Affirmative Action/Equal Opportunity Employer.*

MOLECULAR GENETICS Tenure-Track Faculty Position Available

The Division of Reproductive Genetics, Department of Obstetrics and Gynecology, in collaboration with the Department of Microbiology and Immunology invites applications for a junior or senior-level, tenure-track position focusing on medical genetics. Senior candidates should have a strong record of research accomplishment with sustained program growth and development. Junior candidates will be expected to develop a strong, independent research program with long-term growth potential. The faculty member will be responsible for developing and directing a Molecular Genetics Laboratory for selected prenatal and genetic carrier diagnostic services. Teaching responsibilities, which emphasize quality rather than quantity, include post-doctoral fellows in clinical as well as basic science disciplines, graduate students, and medical students. Strong ties exist with Pediatric Genetics, including the disciplines of cytogenetics, inborn errors of metabolism, and population genetics.

At the University of Tennessee/Universities Physicians' Foundation, a large Center of Excellence grant has resulted in establishment of a Molecular Resource Center within the Department of Microbiology and Immunology featuring state-of-the-art facilities for: DNA cloning and sequencing, oligonucleotide synthesis, peptide synthesis, hybridoma antibody production, amino acid analysis, protein sequencing, and flow cytometry. Funds for the initiation of research programs are available and salary is highly competitive. Applications should consist of a curriculum vitae, copies of several recent publications, a brief statement of future research goals, and three letters of reference to be sent to: **Sherman Elias, M.D., Director, Division of Reproductive Genetics, Professor of Obstetrics and Gynecology, University of Tennessee, Memphis/Universities Physician's Foundation, 853 Jefferson Avenue, Room E102, Memphis, Tennessee 38163.** *The University of Tennessee/Universities Physician's Foundation is an Affirmative Action/Equal Opportunity Employer.*

MEDICAL RESEARCH SCIENTISTS Human Pharmacology/Anti-infectives

The Squibb Institute for Medical Research has a challenging opportunity available for a Medical Scientist to participate in our new drug development programs for antimicrobial, antiviral, and anti-inflammatory drugs. The facilities of a 24-bed clinical pharmacology unit and analytical laboratory are available at a local medical center for the conduct of human investigation. This position also affords the opportunity to work closely with preclinical scientists at all levels.

Primary responsibilities involve the design, conduct, and reporting of Phase I and early Phase II clinical studies. Interest and experience in clinical pharmacokinetics and pharmacodynamics are desirable. Candidates should have an MD degree with 2 years or more of research experience. A strong record of achievement, including publications, should be evident.

In addition to an excellent salary and comprehensive benefits package, The Squibb Institute for Medical Research offers the opportunity for exceptional scientists to pursue stimulating careers. This position is based at our Corporate Headquarters, a pleasant semi-rural setting in Princeton, NJ convenient to both New York City and Philadelphia. Interested candidates should submit their C.V. in confidence to **The Squibb Institute for Medical Research, Human Resources Dept. #481B, P.O. Box 4000, Princeton, NJ 08543-4000.** An equal opportunity employer.



SQUIBB

Where science comes to life.

SENIOR SCIENTIST Drug Disposition

The LILLY RESEARCH LABORATORIES, a Division of Eli Lilly and Company, is seeking candidates for two Senior Scientist positions in the Department of Drug Disposition. Applicants must have a doctoral degree and post-doctoral experience is desirable.

Transport Mechanisms

Primary responsibilities involve establishing a research program to elaborate the physiological mechanisms governing the pharmacokinetic behavior of novel antibiotics. This will require development of *in vitro* and *in vivo* model systems to study the effect of chemical structure changes on the absorption, distribution, and excretion of drugs. The candidate should have a strong background in pharmacology and physiology with knowledge in the areas of analytical methodology and pharmacokinetics.

Metabolic Transformation

Primary responsibilities involve establishing a laboratory program to study the metabolic disposition of drugs in laboratory animals. This will require investigations to characterize or identify the absorption, distribution, excretion, and metabolite profile for novel drug substances. A strong background in chemistry and analytical methodology is essential.

The positions represent a unique challenge to the qualified scientist interested in conducting innovative research in the area of drug discovery.

Qualified candidates should send their curriculum vitae to:



**John W. Crooks
Manager, College Relations (DDP)²
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285**

Equal Opportunity Employer

RESEARCH SCIENTIST

Advancing The Research Of Cellular Immunology

Research Scientist required for continued "cutting-edge" research in cellular immunology. As a pioneer in extracellular matrix biochemistry, Collagen Corporation has made a substantial long term commitment to R & D. Expanding on our versatile core technology, we're researching, developing and manufacturing differentiated biomedical products.

As an important member of our Connective Tissue Research Lab, the immunology group continues its investigation of the therapeutic uses of growth factors, lymphokines and cytokines. This activity requires the addition of an individual with a Ph.D. and 2-3 years' post doctoral experience in cellular immunology and

familiarity with immunochemical techniques.

Collagen Corporation strongly encourages and rewards professional contribution. Our scientific career ladder enables the committed researcher to significantly impact our long term R & D efforts; and, provides opportunity and encouragement for publishing activity allowing for career progress. In addition to professional stimulation and support, we offer an attractive compensation package complete with a relocation program. Inquiries regarding this position should be sent to: S. Hansen, Collagen Corporation, 2500 Faber Place, Palo Alto, CA 94303. We are an equal opportunity employer.



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SCIENCE WRITER

Identify, write and place feature articles about basic and clinical research activities at this leading research center and medical school. Strong knowledge base in biomedical research and superior interviewing skills. Science degree preferred plus minimum two years science writing experience on newspaper, science magazine, or at a university or medical center.

Position offers excellent salary and benefits package including 4 weeks vacation and 100% tuition reimbursement. Send resume, including salary requirement to *Sheila Cooper, Senior Employment Specialist, Albert Einstein College of Medicine Belfer 1207, 1300 Morris Park Avenue, Bronx, N.Y. 10461.*

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ALBERT EINSTEIN
COLLEGE OF MEDICINE

SENIOR ANALYTICAL CHEMISTS

The LILLY RESEARCH LABORATORIES, a Division of Eli Lilly and Company, have immediate openings for Senior Analytical Chemists.

Bioanalytical Chemist

Applicants must have a doctoral degree in analytical chemistry with a background in biochemistry, or a doctoral degree in biochemistry or immunology and significant analytical experience. The Senior Scientist will provide analytical support to multidisciplinary teams developing proteins or antibodies as therapeutic agents.

Analytical Chemist

Applicants must have a doctoral degree in analytical chemistry with an interest in organic chemistry. Experience in HPLC, GC, or TLC is desirable. The Senior Scientist will join a group that is responsible for developing analytical methods to determine the potency, purity, and stability of new drug candidates.

Qualified candidates should send their curriculum vitae to:



John W. Crooks
Manager, College Relations (SAC)
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285

Equal Opportunity Employer

**National Institutes of Health
National Institute of Child Health
and Human Development**

POSTDOCTORAL FELLOWSHIPS IN HUMAN AND PRIMATE DEVELOPMENT

The NICHD is seeking outstanding candidates for several positions beginning January 1988 to study all aspects of human and primate development including perceptual, cognitive, and social behaviors from infancy to adulthood. A Ph.D. or M.D. is required with training in psychology, biology, sociology, or anthropology and statistics. Salary commensurate with NIH guidelines. Submit CV and three letters of reference to:

Dr. Stephen J. Suomi
Laboratory of Comparative Ethology
National Institute of Child Health
and Human Development
National Institutes of Health
9000 Rockville Pike
Building 31, Room B2B15
Bethesda, MD 20892
(301) 496-6832

An Equal Opportunity Employer

Biological Oceanographer

Applications are invited by the Biology Department of The Woods Hole Oceanographic Institution for positions as Biological Oceanographer at various levels on the scientific staff. Applicants should have the PhD degree and, preferably, sea-going experience. At present, the Department has interest in marine microbial ecology, micro- and macroplankton, the benthos, fishes, the behavior, physiological, genetics, and population ecology of marine animals, the biochemical responses of marine organisms to pollutants, and kindred subjects. Teaching opportunities exist in the WHOI/MIT joint program in biological oceanography. Collaborative research with staff in the Institution's other departments, Chemistry, Physical Oceanography, Geology and Geophysics, and Ocean Engineering is encouraged. Applicants should send a resume and the names of 3 professional references to Biology Department Chairman.



WOODS HOLE
OCEANOGRAPHIC
INSTITUTION

Woods Hole, MA 02543

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ASSISTANT PROFESSOR TENURE-TRACK

The University of Medicine and Dentistry of New Jersey-NJMS-Department of Physiology is seeking an Assistant Professor. Candidate is expected to develop an active, independent and productive research program and to obtain extramural support. Teaching duties will include participation in the medical and dental courses and the departmental graduate program. Preferred areas of research interest are: Membrane Physiology and Biophysics, Skeletal, Cardiac and Smooth Muscle Physiology. Qualifications include a Ph.D., M.D. or equivalent degree and a minimum of 2 years' postdoctoral experience. Send copy of CV, statement of research accomplishments and future goals, and the name of 3 references to: **UMDNJ-New Jersey Medical School, Chairman, Department of Physiology, 185 South Orange Avenue, Newark, New Jersey 07103-2757.**

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POST DOCTORAL RESEARCH ASSOCIATE

To study Macromolecular subunit assembly of the human hemoglobins in a biochemistry research laboratory at the University of Lowell. Applicants with recent Ph.D. degrees in Biochemistry, Biophysics or a related discipline will be considered. Preference will be given to individuals with experience in one or more of the following areas: Protein Chemistry (including HPLC), Absorption and/or Fluorescence Spectroscopy, or Stopped-Flow Technique. Salary and starting date are negotiable. Prior to July 15, 1987, interested individuals should send a curriculum vitae, a statement of Research Training and Interests, and the names of three references to: Dr. Melisenda J. McDonald, Biochemistry Program, Department of Chemistry, University of Lowell, One University Avenue, Lowell, MA 01854.

The University of Lowell is an Equal Opportunity/
Affirmative Action, Title IX, 504 Employer



RESEARCH ASSOCIATES CELL CULTURE

Amgen, a dynamic leader in applied biotechnology, has immediate opportunities for experienced Research Associates in Mammalian Cell Culture. Our pioneering work in the development of Erythropoietin and G-CSF has relied upon the cell culture expertise of our Research Associates. Without their support, we would not be in the industry leadership position we are today.

We currently have opportunities for additional Research Associates to support our continuing advancements in the identification and characterization of new therapeutic proteins. If you possess a BS or MS in Biochemistry, Cell Biology or a related discipline and at least 2-4 years experience in the establishment and maintenance of mammalian cell lines, and want the kind of visibility and responsibility only a rapidly growing company like **Amgen** can offer, we'd like to hear from you.

Amgen offers an excellent compensation and benefits package as well as a stimulating and challenging scientific environment. We are located in the scenic Conejo Valley (about an hour's drive northwest of Los Angeles), offering the best in Southern California living. If you possess the necessary qualifications, please submit a resume, in confidence, to:

Recruitment, Dept. #126
AMGEN
1900 Oak Terrace Lane
Thousand Oaks
CA 91320



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POSITIONS OPEN

DIRECTOR CLINICAL CYTOGENETICS LABORATORY

The Department of Laboratories and Pathology at Los Angeles County—University of Southern California Medical Center, the principal teaching hospital of the University of Southern California School of Medicine, seeks a Director for its Cytogenetics Laboratory. Requirements include a Ph.D. in cytogenetics or related field, experience in medical diagnostic cytogenetics and molecular genetics, and eligible for or certified by the American Board of Medical Genetics. Responsibilities include directing the cytogenetics laboratory, establishing an independent research program and participation in the teaching programs of the Department of Pathology. Faculty appointment in the University of Southern California School of Medicine at a rank commensurate with qualifications and experience.

For further information, telephone: 213-226-7151. To apply, send curriculum vitae and three references to: **Edward T. Wong, M.D., Associate Director of Laboratories and Pathology, LAC/USC Medical Center, Room 2900, 1200 North State Street, Los Angeles, CA 90033.**



DIRECTOR INSTITUTE OF MOLECULAR BIOLOGY AND BIOCHEMISTRY SIMON FRASER UNIVERSITY

Applications are being accepted for the position of director of the newly formed and funded Institute of Molecular Biology and Biochemistry. The Institute is a multidisciplinary body with six faculty from the Departments of Biological Sciences and Chemistry. Current faculty research interests vary from physical biochemistry to molecular genetics.

The Director will be expected to oversee the growth of the Institute, including the selection of several new faculty members. The duties of the Director, in addition to maintaining a strong research program, will be to supervise the administration of the graduate program, to act as official spokesman for the Institute, and to administer all funds allocated to the Institute.

Applicants should forward a complete curriculum vitae, reprints of recent significant publications, and three letters of reference to:

Dr. J. W. George Ivany
Vice-President, Academic
Simon Fraser University
Burnaby, B.C. V5A 1S6

Closing date for applications will be 15 September 1987. *Preference shall be given to applicants who are eligible for employment in Canada at the time of application.*



ASSISTANT/ASSOCIATE PROFESSOR INSTITUTE OF MOLECULAR BIOLOGY AND BIOCHEMISTRY SIMON FRASER UNIVERSITY

Applications are being accepted for an assistant/associate professor level appointment in the newly formed Institute of Molecular Biology and Biochemistry. Candidates should have research interests which involve modern molecular genetic techniques in the investigation of protein structure/function relationships. Postdoctoral experience, expertise in modern molecular biological techniques, and demonstrated research potential are required.

Applicants should forward a complete curriculum vitae, reprints of recent significant publications, and three letters of reference to:

Dr. J. W. George Ivany
Vice-President, Academic
Simon Fraser University
Burnaby, B.C. V5A 1S6

Closing date for applications will be 15 September 1987. *Preference shall be given to applicants who are eligible for employment in Canada at the time of application.*

EM TECHNICIAN (Associate in Research I) for Liver Center with B.S./M.S. degree and minimum of 2 years of training/experience (preparation, sectioning, staining, operating EM, and darkroom techniques). Send résumé to: **J. M. Coutts, Yale University, Department of Human Resources, 155 Whitney Avenue, P.O. Box 1404, Yale Station, New Haven, CT 06520.** *Yale University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

DIRECTOR AND STAFF FOR A PROTEIN STRUCTURE FACILITY

The University of Iowa is seeking a Director and two staff members for its Protein Structure Facility. The facility is principally responsible for maintenance of analytical instrumentation within specifications, for processing samples submitted by the research and development community, and for instruction in the operation of hands-on instrumentation. Opportunity is provided for collaborative work in the development of new protocols and for conducting periodic workshops in the use of the facility. Contemporary instrumentation is in place for peptide microsequencing and compositional analysis, peptide synthesis, HPLC chromatography and spectroscopic analysis. The Director should have a doctoral degree or equivalent experience. Applicants should be experienced in quantitative analysis, protein chemistry, and separation procedures. Practical knowledge of electronics, optics, and computerized analysis is desired. Opportunity exists for some on-site training. The staff members should have a baccalaureate degree in an appropriate science area and experience in quantitative chemical analysis. Inquiries for these positions should be addressed to: **Dr. Earle Stellwagen, Chairman, Advisory Committee, Department of Biochemistry, 4-612 BSB, University of Iowa, Iowa City, IA 52242.** *An Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION—MEDICINE AND PHARMACOLOGY. The Department of Medicine, Vanderbilt University School of Medicine is seeking an investigator at the assistant professor level in the area of clinical pharmacology of adenosine, the autonomic nervous system, and cardiovascular control. The applicant should have an M.D. degree and should have completed a 3-year residency in internal medicine and have had some training in cardiovascular pharmacology, ideally a fellowship in clinical pharmacology. The candidate should also have previous experience in analytical techniques, animal models of cardiovascular research and hypertension, and clinical research. Experience in evaluation and treatment of patients with autonomic dysfunction is preferable. Previous track record of grant support is expected. *Sex, race, religion, or national origin will not be factors in the selection process.* For further details, contact: **Dr. Garret FitzGerald at 615-322-3304 or apply by sending curriculum vitae to Mrs. Fran Johnston, Division of Clinical Pharmacology, Vanderbilt University, Nashville, TN 37232.**

FACULTY POSITIONS IN MOLECULAR IMMUNOLOGY

Several tenure-track positions are available immediately in the Department of Microbiology and the Department of Pathology and Laboratory Medicine. Candidates with expertise in protein structure, lymphocyte receptor gene expression, or developmental genetics of the immune system are preferred. However, exceptionally qualified candidates with strength in related areas will be considered. The selected candidates will be expected to establish a vigorous research program as well as participate in the educational activities of the Medical School and the biomedical graduate program. The appointments in pathology do not require clinical service, although such activity might be arranged if desired. Interested individuals should submit curriculum vitae, bibliography, three or more references, and a statement of research plans either to: **Dr. Fred Karush, Department of Microbiology, or Dr. Michael Cancro, Department of Pathology and Laboratory Medicine, University of Pennsylvania, Philadelphia, PA 19104-6076.**

GENE EXPRESSION

The Laboratory of Molecular Endocrinology at the Massachusetts General Hospital seeks a **POSTDOCTORAL FELLOW OR RESEARCH ASSOCIATE** to work on the regulation of polypeptide hormone genes. Experience in recombinant DNA techniques is preferable, but not essential. The laboratory is focused on studies of the cis and trans factors that lend cell-specific expression to polypeptide hormone genes. A microchemical facility for protein sequencing-synthesis and DNA synthesis is available. Salary and rank are commensurate with experience. Send curriculum vitae and two letters of recommendation to: **J. Habener, Chief, Laboratory of Molecular Endocrinology, Massachusetts General Hospital, Boston, MA 02114.**

POSITIONS OPEN

HUMAN HISTOCOMPATIBILITY IMMUNOLOGIST

The Department of Pathology at the Robert Wood Johnson Medical School (formerly Rutgers Medical School) of the University of Medicine and Dentistry New Jersey has an opening at the assistant or associate professor level for an individual to head its tissue typing laboratory. The appointee will be expected also to participate in research and teaching. Applicants should hold M.D. or Ph.D. degree and have demonstrated competence in human histocompatibility testing. Submit curriculum vitae and names of three references to: **Dr. Kai Raska, Jr., Department of Pathology, UMDNJ—Robert Wood Johnson Medical School, 675 Hoes Lane, Piscataway, NJ 08854-5635.** *An Equal Opportunity/Affirmative Action Employer M/F/H/V.*

IMMEDIATE OPENING

A position to establish a cell culture laboratory for growing cerebral endothelium and tumor cell type. Additional experience in electron microscopy and in vi techniques is desirable. Salary is commensurate with experience.

Richard Broadwell, Ph.D.
Division of Neurological Surgery
University of Maryland
Medical School Teaching Facility
10 South Pine Street; Room 634
Baltimore, MD 21201
Telephone: 301-328-5482

INSTITUTE OF HUMAN GENETICS UNIVERSITY OF MINNESOTA

The Institute of Human Genetics invites applications for one full-time position in the field of **HUMAN POPULATION GENETICS** at the rank of assistant professor (tenure-track). Candidates with a Ph.D. or M.D. in one of the following disciplines: population genetics, biostatistics, genetic epidemiology, or public health, plus 2 years of relevant postdoctoral experience that includes human gene mapping or complex segregation analysis will be considered. Candidates will be expected to develop a vigorous, independent research program, participate in teaching, and interact with Institute members in the development of the Institute. Requirements: In-depth knowledge of multilocus linkage analysis as applied to risk prediction in genetic counseling; knowledge of segregation and linkage analysis of common disease (especially familial cancer); and interest in evolution at the molecular level. Please send curriculum vitae, a short description of research plans, and three letters of recommendation to: **Chair, Search Committee, Institute of Human Genetics, University of Minnesota Medical School, Box 206 UMHC, Harvard Street at East River Road, Minneapolis, MN 55455.** The last date for receipt of applications is 15 July 1987. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

INSTRUCTIONAL POSITIONS IN FISHERIES AND WILDLIFE (Search Reopened).

Applicants are invited for two instructional positions to teach courses in fisheries and wildlife, laboratory technique and wildlife law enforcement. Term position: Master's degree or higher required. Professional certification Wildlife Society or American Fisheries Society preferred. Teaching and field experience in fish and game management required. Temporary position: Master's degree required. Certification preferred. Work experience in fish and game management desirable. Salary range: Term \$25,000 to \$35,000; Temporary—\$18,000 to \$25,000. Application deadline: 1 July 1987. Send résumé to: **Joseph A. Robustelli, Director of Personnel and Affirmative Action, State University of New York, College of Agriculture and Technology, Cobleskill, NY 12043.** *An Equal Opportunity/Affirmative Action Employer.*

HEAD MOLECULAR BIOLOGY

We are a young, dynamic, research-driven, result-oriented company, recognized as a leader in the field of peptide synthesis. We want to diversify and expand into the field of biotechnology. We are looking for an experienced molecular biologist to lead our molecular biology group.

You have experience and in-depth familiarity with cloning and expression of eukaryotic genes in bacteria as well as with protein purification. You will lead and direct a group of molecular biologists, geneticists, and biochemists. Further more you will be responsible for implementing new ideas and for development and production of new proteins.

Qualifications must include a Ph.D. and several years of working experience.

For fully confidential consideration, please send your resume to:

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DEPARTMENT HEAD Plant, Soil and Entomological Sciences

The College of Agriculture at the University of Idaho invites applications and nominations for the position of Head of the Department of Plant, Soil and Entomological Sciences.

We seek an accomplished scientist to provide leadership in our research, teaching, and extension programs in crop science, entomology, horticulture, plant pathology, soil science and weed science. The department currently consists of 55 faculty with diverse research interests, 24 professional support personnel (research associates, postdoctorates, and instructors), 54 classified staff, 58 graduate students and 44 undergraduates, which are distributed in Divisions of Entomology, Plant Science, Plant Pathology and Soil Science, each with its own part-time division chair. The department head is directly responsible to the dean for programs in all divisions of the department, coordinates multidisciplinary programs, as well as programs within and between departmental divisions, and serves as departmental liaison to commodity groups.

Applicants must have an earned Ph.D. in plant science, entomology, plant pathology, soil science, or related discipline, and experience in agricultural research with proven or potential administrative ability. The successful candidate should have a strong record of scholarly achievement as indicated by publication record, understanding of basic and applied research in agriculture, and success in obtaining research funding.

Applicants should submit a letter of application, curriculum vitae, statement of interests and goals, and the names, addresses, and telephone numbers of three references, to **Dr. A. J. Lingg, Chairman, Search Committee, Department of Bacteriology and Biochemistry, University of Idaho, Moscow, ID 83843, (208) 885-7967**. Search and selection procedures will be closed when a sufficient number of qualified candidates have been identified, but not earlier than August 15, 1987. *The University of Idaho is an affirmative action/equal opportunity employer.*

Microbial Physiologists/ Geneticists

Exciting discoveries in Pfizer Central Research labs have created corresponding opportunities in our expanding Fermentation Process R&D group. Strong scientific credentials together with managerial potential are essential. Candidates should have a PhD in Microbiology or Biochemistry with expertise in both microbial physiology and genetics. Relevant post-doctoral experience is highly desirable.

Duties will include basic studies on metabolic pathways, control mechanisms, isolation and analysis of key metabolic intermediates. You will work with a highly motivated multi-disciplinary team, designing and optimizing fermentation processes for important new agents in support of our pharmaceutical, animal health and chemical businesses.

In addition to a stimulating professional environment, we offer a competitive salary/benefits package plus an attractive southeastern Connecticut shore location. Qualified applicants should submit their resume and references, in confidence, to: Jerry K. Larson, PhD, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, Connecticut 06340.



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POSITIONS OPEN

FBI LABORATORY/MOLECULAR BIOLOGIST

The Forensic Science Research Unit of the FBI Laboratory invites applications for a master's or postdoctoral fellow level individual to assist with research to develop or apply molecular biology methods for the analysis of body fluids/stains. The candidate should have experience in RFLPs, dot blots, DNA sequencing, and cloning. Please send résumé and names of three references by 1 August 1987, to: **SA Michael G. Noblett, Research Unit Chief, Forensic Science Research and Training Center, FBI Academy, Quantico, VA 22135.** Starting salary level is \$22,400 to \$35,300, commensurate with experience. *The FBI is an Equal Opportunity Employer. U.S. citizenship required.*

LECTURERS

The Department of Biology at the University of Michigan announces the availability of three lecturer positions. These are non-tenure-track positions. However, the terms of appointments will be for a period of 3 years and are renewable. Lecturers in the Department of Biology serve as coordinators and supervisors of instruction in both introductory and advanced laboratory courses. A Ph.D. in a field of biology and evidence of experience in teaching laboratory courses are required. One of the three individuals we seek would have responsibilities for the following:

1. Introductory biology laboratories
2. Genetics and developmental biology laboratories
3. Microbiology and cellular and molecular biology laboratories

Duties include, in addition to general supervisory matters, working with faculty to update laboratory experiments and training of graduate student teaching assistants who serve in the laboratories. Appointments are on a 12-month basis and include a liberal benefits package from the University. Interested parties should specify in a letter of application which position is sought. A curriculum vitae must be included and the applicant should arrange for three letters of recommendation. All materials should be addressed to:

Lecturer Search
Department of Biology
The University of Michigan
Ann Arbor, MI 48109-1048

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

DEPARTMENT OF AGRICULTURE (USDA) AGRICULTURAL RESEARCH SERVICE (ARS)

MICROBIOLOGIST PLANT SCIENCE RESEARCH ST. PAUL, MINNESOTA

ARS is seeking a postdoctoral research associate, for 2 years in duration in the area of rumen microbiology. The candidate will conduct research on interaction of rumen fiber-degrading bacteria with lignin fraction of plant cell walls. Candidates must have experience in anaerobic microbiology and rumen fibrolytic bacteria.

Incumbent must be a U.S. citizen. Salary is commensurate with experience (\$27,172 to \$32,567). For information on the research program and/or position contact: **Dr. H. G. Jung on 612-624-7753.** For information on application procedures/forms contact **Janie E. Carr on 301-344-2756.** Applications in response to this advertisement should be marked 7N015. Position open until filled.

Mailing Address: USDA, Agricultural Research Service, University of Minnesota, 130 Haecker Hall, St. Paul, MN 55108.

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Ph.D./POSTDOCTORAL FELLOW: Positions in molecular biology available for professional and technical personnel for a large multi-center collaborative study group. Recombinant DNA technology, oncogenes, protein chemistry, vascular biology, or transgenic mice experience required. Competitive salary and benefits. Positions available summer to fall 1987. Long Island Jewish Medical Center is a major medical, teaching, and research institution on Long Island within commuting distance of New York City. Send complete curriculum vitae, bibliography, names and telephone numbers of three references to: **Dr. Arthur H. Lockwood, Department of Radiation Oncology, Long Island Jewish Medical Center, New Hyde Park, NY 11042.** *Equal Opportunity Employer.*

POSITIONS OPEN

The Scripps Institution of Oceanography, University of California at San Diego, invites applications from qualified persons who have recently obtained the Ph.D. degree (or equivalent) in the area of **MARINE MICROBIAL CHEMICAL ECOLOGY.** Candidates with backgrounds in marine microbiology/chemical ecology and with interests in microbial adaptations, symbioses, and chemical interactions of marine organisms are invited to apply. The appointment will be as a postgraduate research or assistant research biologist, depending on experience and qualifications. The appointment will be made initially for 1 year, with an additional term of appointment contingent on funding. Annual salary will be commensurate with the appointee's qualifications, within the range of \$23,964 to \$35,800 on an 11-month basis. Because the salary support for this position is provided by a private foundation, only U.S. citizens are eligible. Candidates should submit curriculum vitae, a list of three referees, and a short research plan to: **Chairman, Mellon Foundation Fellowship Search Committee, A028, Scripps Institution of Oceanography, University of California, La Jolla, CA 92093.** Applications must be received by 31 July 1987 to ensure consideration. *The University of California is an Affirmative Action/Equal Opportunity Employer, and invites applications from all qualified individuals.*

MOLECULAR CELL AND DEVELOPMENTAL BIOLOGY, UNIVERSITY OF SOUTHERN CALIFORNIA. The Molecular Biology Section of the Department of Biological Sciences, College of Letters, Arts and Science, invites applications for a tenure-track faculty position, at a junior or senior level. The successful candidate will be expected to establish and maintain a vigorous, independent research program in molecular cell biology or molecular developmental biology. The candidate will also be expected to participate in the teaching programs of the Department at the undergraduate and graduate level, and to participate in the further development of the Molecular Biology Section.

Applicants should send a current curriculum vitae, a statement of research plans, and the names of three references by 15 August 1987 to: **David J. Galas, Director of Molecular Biology, ACB-529 University of Southern California, University Park, Los Angeles, CA 90089-1481.** *The University of Southern California is an Equal Opportunity Employer.*

NEUROSCIENTISTS

THE DEPARTMENT OF CELL BIOLOGY AND NEUROANATOMY AT THE UNIVERSITY OF MINNESOTA seeks applications for highly qualified neuroscientists with expertise in **SYSTEMS NEUROSCIENCE.** Systems studied may be either those of invertebrates, or the sensory or central autonomic systems of vertebrates. Applicants should be skilled in techniques of intracellular recording and tracing of individual neurons, as well as in identification of neurotransmitters and/or receptors, and must have a relevant graduate degree (Ph.D., M.D., or both, or equivalent foreign degree) with at least 2 years of productive postdoctoral experience. Teaching will be related to neuroscience courses taught to medical and dental students by the department. In addition, training of graduate students and teaching in appropriate graduate programs will be required. Appointments may range from assistant professor (tenure track) to professor (tenured), commensurate with experience (guidelines for appointment levels will be sent on request). Applications or nominations (to be received no later than 1 August 1987) should be sent to: **Neuroscience Search Committee, Department of Cell Biology and Neuroanatomy, 4-135 Jackson Hall, 321 Church Street SE, Minneapolis, MN 55455.**

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

PHYSICAL/INORGANIC. Applications are invited for a 1-year position with possible tenure-track renewal for a physical/inorganic chemist, to begin in the fall of 1987. Teaching responsibilities include general and physical chemistry, bonding and structure, and statistical and quantum mechanics. Send transcript copies, and curriculum vitae with names, addresses, and telephone numbers of three references to: **Dr. Norman T. Boggs, III, Chair, Department of Chemistry and Physics, Saint Andrews Presbyterian College, Laurinburg, NC 28352.** *Women and minorities are encouraged to apply.*

POSITIONS OPEN

PEDIATRICS—The University of Wisconsin (UW)/Madison Department of Pediatrics is seeking applicants for a tenure-track position as an **ASSISTANT OR ASSOCIATE PROFESSOR IN PEDIATRICS** with the possibility of a joint appointment in the Department of Medical Genetics. Successful candidate will establish a relevant biochemical and/or molecular genetics research program in the Harry A. Weisman Center on Mental Retardation and Human Development. The center, supported by an NIH Center grant, has existing sections in clinical genetics (including a cytogenetics laboratory), metabolism, neurochemistry, and neurophysiology. Candidates should forward curriculum vitae to: **Dr. Philip M. Farrell, UW Clinical Science Center, Room H4/458, 600 Highland Avenue, Madison, WI 52792.** *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

PERMANENT TRACK POSITION in immunology and molecular biology for person with M.D. and/or Ph.D. degree. Applicant should have experience in the techniques of molecular biology and conducting research related to the ontogeny and differentiation of immunocompetent cells and/or the pathogenesis of virally induced immune abnormalities. This position is in the Department of Immunology which conducts basic research and has active predoctoral and postdoctoral programs. Excellent start-up funds are available for the establishment of the laboratory. Will receive academic appointment commensurate with his/her qualifications. Send curriculum vitae and brief description of research interests to: **G. J. Gleich, M.D., Department of Immunology, Mayo Medical School and Mayo Foundation, Rochester, MN 55905.** *An Equal Opportunity/Affirmative Action Institution.*

POSTDOCTORAL MOLECULAR ENDOCRINOLOGIST: Atrial Natriuretic Factor (ANF). Position available for studies on the regulation of ANF gene expression, processing, and secretion by isolated atrial and ventricular myocytes. Projects include: (i) biochemical studies using biosynthetic labeling, quantitative immunoprecipitation, HPLC, and dot blot mRNA analyses to evaluate various effectors of the ANF expression and secretion, and (ii) morphological studies using in situ hybridization and EM immunohistochemistry to characterize the ultrastructural aspects of ANF expression in redifferentiating cultured myocytes. Please submit curriculum vitae and the names and addresses of three references to: **Dr. Christopher C. Glembotski, Department of Biology, San Diego State University, San Diego, CA 92182.**

SINAI RESEARCH INSTITUTE CENTER FOR CELL BIOLOGY

The Center for Cell Biology is seeking scientists for challenging **POSTDOCTORAL AND RESEARCH ASSOCIATE POSITIONS** in an interdisciplinary neuroscience research program. Special emphasis is placed on the use of tissue culture techniques to study dopamine-containing neurons and their role in basal ganglia function. Laboratories within the Center include:

Laboratory of Molecular Neurobiology (M. J. Bannon, Ph.D.) Study of the regulation of neuropeptide biosynthesis in vivo and in culture using neurochemical and molecular genetic techniques.

Laboratory of Clinical Immunology (C. M. Brickman, M.D.) Immunology of autoimmune and complement-related diseases and their relation to neurological disorders.

Laboratory of Neurophysiology (L. A. Chiodo, Ph.D.) Electrophysiological properties of dopamine neurons and their modulation studied in vivo and in culture using intracellular and extracellular techniques.

Laboratory of Biochemical Pharmacology (J. Graneman, Ph.D.) Molecular mechanisms of membrane signal transduction and their physiological regulation; role of second messengers in cell function.

Laboratory of Neurochemistry (G. Kapatos, Ph.D.) Flow cytometric analysis of the adult and developing nervous system focusing on the biochemical/cell biological characterization of dopamine neurons.

Laboratory of Clinical Neuroscience (P. LeWitt, M.D.) Behavioral and pharmacological study of neurodegenerative disorders, with the investigation of new therapeutic approaches (for example, parkinsonism).

Interested individuals should send their curriculum vitae and the names of three references to: **Dr. G. Kapatos, Director, Center for Cell Biology, Sinai Hospital of Detroit, 6767 West Outer Drive, Detroit, MI 48235.**

Entomologist

Crop Genetics International, located in suburban Baltimore/Washington is developing a family of genetically engineered microbial pesticides which can be inoculated into seeds and plants. Crop Genetics is seeking an experienced and enthusiastic entomologist to initiate and manage its insect biology program. Responsibilities include: hiring and supervising a staff; establishing an insectary to evaluate microbial insecticides in lab and field environments. The successful candidate will be a key player in the company's product development program. Requirements are:

- a PhD in Entomology or a related field
- a minimum of three to five years professional experience in insectary operations and evaluating properties of insecticidal molecules
- project or department manager experience and interest
- ability and willingness to independently establish and achieve goals.

To apply forward a curriculum vitae in confidence and the names of three professional references to:

Department E

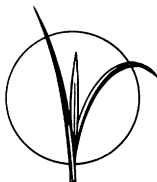
Plant Pathologist

Crop Genetics International is seeking an energetic individual to manage an endophyte screening program aimed at identifying microbes which have potential for crop protection. Applicants should be highly motivated and able to work independently to develop methods for studying microbial interactions both *in vitro* and *in planta*. Requirements include:

- MS in plant pathology or related field
- Experience in culture of plant-associated microbes.

To apply forward a curriculum vitae in confidence and the names of three professional references to:

Department PP



Crop Genetics International

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RESEARCH SCIENTIST (PHARMACOLOGY)

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The selected candidate will join a dynamic team using Isolated Tissue methodologies to explore and define, at the receptor and cellular level, new approaches to drug discovery and the mechanisms of drug action. Experience in Isolated Tissue techniques is preferred. Knowledge and/or experience in Endothelium-mediated vascular effects would be an asset.

A minimum of a BS/MS degree in Life Sciences or a related biological discipline (or equivalent experience) is required for this position, along with a minimum of 1-5 years of pharmacology laboratory experience.

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RESEARCH SCIENTIST MEDICINAL BIOCHEMISTRY

BURROUGHS WELLCOME CO., a producer of high quality pharmaceuticals and having a top reputation for innovative research is seeking to fill an opening in its Experimental Oncology section. The candidate should have a B.S. or M.S. with experience in tumor biology or a related field, or the equivalent in training and experience.

The principal duties of this position would be to carry out *in vivo* studies related to the establishment and use of model systems for evaluating the activity and mechanism of action of antitumor and antimetastatic agents. The candidate should have experience with the maintenance and use of experimental tumors and should be able to work with a high degree of independence. A working knowledge of tissue culture, HPLC and enzymology would also be desirable.

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POSITIONS OPEN

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

POSTDOCTORAL POSITION available immediately for 2 years. NIH-funded project is to study immunological control mechanisms involved in generation of inflammatory mediators within the lungs. Experience in tissue culture immunochemical analysis of proteins and enzymes required, basic knowledge of molecular biology preferred. Please send curriculum vitae including names and telephone numbers of references to: **Dr. Usha Desai, Department of Pathology, New York Medical College, Valhalla, NY 10595.**

POSTDOCTORAL POSITION available immediately to study regulation of choline acetyltransferase using enzymology and recombinant DNA techniques. Training in biochemistry or molecular biology preferred. Salary commensurate with experience. Send curriculum vitae and names of references to: **Dr. Louis B. Hersh, Ph.D., Department of Biochemistry, The University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75235. An Equal Opportunity Employer.**

POSTDOCTORAL POSITION

Postdoctoral position now available for person interested in pursuing studies on the molecular organization of mitotic spindles and microtubule-organizing centers. Experience with cell and molecular biological techniques on cytoskeleton is preferred. Send curriculum vitae and names of three references to: **Dr. Ryoko Kuriyama, Department of Cell Biology and Neuroanatomy, University of Minnesota, 4-135 Jackson Hall, Minneapolis, MN 55455.**

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

POSITIONS OPEN

POSTDOCTORAL POSITION. Position available immediately for Ph.D. trained in immunoassays, lipid and protein chemistry, physical chemistry, or biophysics. Current work is directed at purifying hydrophobic surfactant proteins and lipid/protein interaction. Work involves HPLC isolation of surfactant proteins and study of their interaction with phospholipids using biophysical, physiological, immunochemical, and morphological techniques. Contact: **H. William Taesch, M.D. (after 1 July 1987) at Division of Neonatology, Department of Pediatrics, King/Drew Medical Center, 12021 South Wilmington Avenue, Los Angeles, CA 90059; or (before 1 July 1987) at 221 Longwood Avenue, Boston, MA 02115. King/Drew is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION

Areas of investigation include: (i) studies of protein kinases and cyclic nucleotide phosphodiesterases and cloning of the cDNAs and genes for these proteins; (ii) regulation of processes by cAMP and cGMP in intact heart, liver, and fat cells. Please send curriculum vitae and references to: **Dr. Jackie D. Corbin, Ph.D., Department of Molecular Physiology and Biophysics, Howard Hughes Medical Institute, Vanderbilt University Medical School, Nashville, TN 37232.**

POSTDOCTORAL POSITION available in fall/winter 1987 for a plant biochemist/physiologist or molecular biologist to investigate increased N_2 -fixation and nodulation caused by a glutamine synthetase inhibitor, tabtoxinine- β -lactam, released by a bacterium on legume roots. Experience in nitrogen metabolism, microbiology, or molecular biology desired. The PI is: **Dr. Pat J. Langston-Unkefer, 505-667-1001, at Mail Stop C345.**

To formally apply, send résumé, undergraduate and graduate transcripts, and three letters of reference to: **Carol Rich, Human Resources Development Division, Los Alamos National Laboratory, Mail Stop P290, Los Alamos, NM 87545. An Affirmative Action/Equal Opportunity Employer operated by the University of California for the Department of Energy.**

POSITIONS OPEN

POSTDOCTORAL POSITION available now for an individual with an interest and strong background in phospholipid biochemistry. TLC and GLC experience desirable. Research involves study of tissue membrane lipids as part of an ongoing research project on the biology of aging. Send a complete transcript, a résumé and the names of three references to: **Dr. A. P. Marti, Department of Pathology, University of Missouri School of Medicine, Columbia, MO 65212. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available for recent Ph.D. with strong background in molecular biology, biochemistry, and/or recombinant DNA technology. Research will involve studies on cellular and viral oncogenes and their products [refer to *MCB* 5, 1122; *MCB* 3900; *J. Virol.* 61, 1893; *MCB* 7, 1978]. Send curriculum vitae and names of three references to: **Dr. Donald J. Fujita, Department of Medical Biochemistry, University of Calgary Health Science Centre, 333 Hospital Drive, N.W., Calgary, Alberta, Canada T2N4N1.**

POSTDOCTORAL POSITION, available immediately, to study the enzymology and molecular biology of asparagine-linked glycosylation in mammalian cell. Techniques will include cell culture, molecular cloning, protein purification, and carbohydrate chemistry. A background in carbohydrate chemistry is preferred, but not essential.

Send curriculum vitae and the names and telephone numbers of three references to: **Mark A. Lehman, Department of Pharmacology, University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75235. Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE position available summer 1987 for project involving experimental gynogenesis in scallops, including cytological and genetic monitoring of experimental treatment. Send résumé and references to: **Dr. Richard K. Koehn, Department of Ecology and Evolution, Life Science Building, SUNY Stony Brook, Stony Brook, NY 11794-5245. SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer.**

NATIONAL INSTITUTE ON AGING National Institutes of Health Public Health Service

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

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

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

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CARDIOVASCULAR PHARMACOLOGIST/BIOCHEMIST Cellular Mechanisms Research

The Pharmaceutical Research Division of Warner-Lambert/Parke-Davis has an immediate opening for a senior scientist in cardiovascular research. The successful candidate will lead a group of scientists in the development, evaluation and recommendation of strategies for the discovery of novel antihypertensive agents.

Qualified applicants will possess the following:

- Ph.D. or equivalent in pharmacology or related discipline with strong emphasis on cellular metabolism.
- 3-5 years postdoctoral research experience at the cellular level in cardiac and/or vascular muscle research. Desired, though not essential, experience would include familiarity with calcium movements, phosphatidylinositol metabolism or protein phosphorylation.
- Excellent oral and written communication skills, including a documented record of scientific achievement as evidenced by publications.

We offer excellent compensation and benefits at our modern facilities adjacent to the University of Michigan campus. Interested, qualified candidates should forward curriculum vitae and salary requirements to: **Ms. S. Hultquist, Human Resources, WARNER-LAMBERT/PARKE-DAVIS, 2800 Plymouth Road, Ann Arbor, MI 48105.**

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Immediate positions are open for individual(s) at the Master's or Ph.D. level, preferably with experience, in the following areas:

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ImmunoTherapeutics, Inc., intends to hire one or more individuals to fill these needs depending on the background and experience of applicants. Compensation commensurate with experience. Reply in confidence to **ITI, 3505 Riverview Circle, Moorhead, MN 56560, (701) 237-5682.**

NATIONAL INSTITUTES OF HEALTH (NIH) NATIONAL CANCER INSITITUTE (NCI)

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

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

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POSITIONS OPEN

POSTDOCTORAL POSITION OPEN

Postdoctoral position available 1 January 1988 in the **Developmental Biology Center, University of California, Irvine, CA 92717**. Recent Ph.D. required, preferably in cell, molecular, or developmental biology, neurobiology, or genetics. Positions are for research with **Dr. Peter Bryant** (molecular genetics of growth control in *Drosophila*), **Dr. Ronald Meyer** (development of selective nerve connections in vertebrate visual systems), **Dr. Robert Steele** (developmental genetics of proto-oncogenes), **Dr. Marianne Bronner-Fraser** (role of extracellular matrix in neural crest cell migration and differentiation), or **Dr. J. Lawrence Marsh** (molecular genetics of embryonic patterning and regulation of catecholamine gene expression in *Drosophila*). U.S. citizenship or permanent residency status required. For more information, contact the individuals above. To apply, submit résumé and description of research interests and experience, and have three letters of recommendation sent to: **The Director, Developmental Biology Center (address above)**. Deadline for applications: 1 October 1987. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS available for molecular biologist with training in cloning and sequencing, and biochemist with experience in protein purification and characterization. Studies related to the cellular and molecular biology of pleiotropic response induced by peroxisome proliferators. Applicants should send curriculum vitae and the names of at least three references to: **Dr. Janardan K. Reddy, M.D., Professor, Department of Pathology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611.**

CYTOSKELETON POSTDOCTORAL POSITION

Postdoctoral position is available to study cytoskeletal reorganization in living cells. Questions to be examined include cell motility, cell division, membrane-cytoskeleton interactions, oncogenic transformation, and myogenesis. The approach involves state-of-the-art methods of fluorescence microscopy, microinjection, image intensification, digital image processing, and fluorescence photobleaching. Applicants should submit curriculum vitae, descriptions of previous research with reprints, and three letters of recommendation to: **Dr. Yu-li Wang, c/o Personnel Office, Cell Biology Group, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.**

*An Equal Opportunity/Affirmative Action Employer
M/F/H*

POSTDOCTORAL RESEARCH ASSOCIATE

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

POSTDOCTORAL RESEARCH position for Ph.D. in biochemistry or related field for project involving purification of human tumor-associated antigens. Experience with tissue culture, protein purification techniques desirable. Reply with curriculum vitae to: **Elliot Alpert, M.D., Department of Medicine/GI Section, Baylor College of Medicine, Houston, TX 77030.**

POSTDOCTORAL RESEARCH ASSOCIATE.

A position is available immediately to investigate the molecular mechanisms of DNA repair in the yeast *Saccharomyces cerevisiae*. The individual will be expected to overproduce, purify, and characterize the repair proteins encoded by the RAD genes of *S. cerevisiae*. Ph.D. required in biochemistry or molecular biology, with experience in enzyme purification and recombinant DNA techniques. Salary commensurate with NIH postdoctoral levels. Send curriculum vitae, summary of research experience, and names of three references to: **Dr. S. Prakash, Department of Biology, University of Rochester, Rochester, NY 14627. Equal Opportunity Employer (M/F).**

POSITIONS OPEN

U.S. DEPARTMENT OF AGRICULTURE (USDA) AGRICULTURAL RESEARCH SERVICE (ARS)

POSTDOCTORAL RESEARCH ASSOCIATE POSITIONS—Positions are available at the Northern Regional Research Center, Peoria, IL, in three areas of research: (i) sugar transport in developing maize endosperm, including the use of photolabile analogs to isolate and characterize membrane hexose carriers; (ii) glycoprotein biosynthesis and secretion in maize endosperm including enzymology of synthesis, structural studies of oligosaccharides, and targeting of proteins; (iii) regulation of lipid metabolism in soybeans including the measurement of enzyme activities during temperature acclimation and isolation and characterization of the enzymes. Knowledge and experience in enzyme assay, isolation, or purification required. Appointments will be at GS-11 (\$27,172) for 1 year and will be extended to 2 years. Applicants must be U.S. citizens and have a Ph.D. Please send curriculum vitae and names of three references to: (i) **Frederick C. Felker**, (ii) **Jan A. Miernyk**, (iii) **Thomas M. Cheesbrough, Seed Biosynthesis Research Unit, USDA-ARS-Northern Regional Research Center, 1815 North University Street, Peoria, IL 61604.** Applications in response to this announcement must be marked 7N016. ARS is an Equal Opportunity Employer.

POSTGRADUATE RESEARCH BIOLOGIST position available in fall 1987 to study either (i) the molecular and genetic defect in respiration-deficient mammalian cell mutants, or (ii) the organization of a human minichromosome (including the centromere) isolated in human/hamster hybrid cells. Salary based on University of California pay scale.

Must have Ph.D. Preference will be given to a candidate with experience in tissue culture and recombinant DNA techniques. Please send curriculum vitae, copies of reprints, and names and addresses of three references by 21 August 1987 to: **Dr. I. E. Scheffler, Department of Biology, B-022, University of California, San Diego, La Jolla, CA 92093.**

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

PROTEIN CHEMISTRY: Two postdoctoral/research associate positions available in the laboratory of **Professor Timasheff**, Brandeis University, to carry out research in protein chemistry. The areas of research are: (i) Mechanisms of protein- and protein assembly structural stabilization by solvent additives and of solvent modulation of biological activity; (ii) mechanisms of interaction of anticancer drugs with tubulin and consequent inhibition of microtubule formation; linkages between drug binding and tubulin polymerization, and effects of structural modifications and structural simplifications of the drug molecules on interactions with tubulin; (iii) pathways of tubulin self-assembly and ligand (nucleotides, ionic species) control of the end products formed (microtubules, rings, sheets); and (iv) solution mapping of the surface of the tubulin molecule by distance measurements between the various liganding sites (GTP, cations, drugs and drug moieties) using energy transfer fluorescence and resonance techniques, and changes in topography induced by the binding of various ligands. Send applications to: **Dr. Serge N. Timasheff, Graduate Department of Biochemistry, Brandeis University, Waltham, MA 02254. Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSISTANT PROFESSOR. Department of Medicine, University of Pennsylvania, seeks Ph.D. (biochemistry or molecular biology) to work full time on research project concerned with hormonal modulation of renal epithelial sodium transport. Background in electrophysiological and biochemical effects of aldosterone and insulin, and experience with model renal epithelia desirable. Send curriculum vitae and names of three references to: **Malcolm Cox, M.D., Medical Service (111), VA Medical Center, University and Woodland Avenues, Philadelphia, PA 19104. An Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

PROTEIN NMR SPECTROSCOPIST, University of Maryland—The Center for Advanced Research in Biotechnology (CARB) and the Department of Chemistry and Biochemistry, University of Maryland, College Park, are jointly searching for an NMR spectroscopist with demonstrated abilities in the determination of the structures of proteins by high field NMR spectroscopy. The position is available at any academic level.

The successful candidate will hold a tenured or tenure-track position at CARB, one of the Maryland Biotechnology Institutes whose mission is protein engineering, with a half-time professional appointment in the Department of Chemistry and Biochemistry on the College Park campus. CARB will be housed in a 40,000-square-foot research facility currently under construction and scheduled to be completed in March 1988 in Rockville, Maryland . . . the heart of Maryland's biotechnology community; CARB's temporary headquarters are at the National Bureau of Standards in Gaithersburg, Maryland.

The current staff include specialists in the areas of x-ray crystallography and protein modeling; the faculty in the Department of Chemistry and Biochemistry at the College Park campus include several enzymologists. CARB will be equipped with modern high field NMR spectrometers necessary for determination of protein structures (500 and/or 600 MHz) as well as x-ray diffraction and computational facilities.

Interested candidates should send curriculum vitae, statement of research interests and accomplishments, and three letters of recommendation by 1 September 1987 to: **CARB/UMCP NMR Research Committee, Department of Chemistry and Biochemistry, University of Maryland, College Park, MD 20742. The University of Maryland is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSISTANT PROFESSOR, MARINE AND ATMOSPHERIC CHEMISTRY. Applicants should have a Ph.D. in chemistry and a minimum of 2 years of postdoctoral research in environmental chemistry. They should have considerable experience with the sampling and analysis of trace species in the ocean and atmosphere environments and with the use of advanced statistical techniques for the analysis of data. Candidates are expected to independently develop a vigorous research program that emphasizes field investigations. Curriculum vitae, a summary of research experience, a brief statement of future research interests, and the names of three references should be submitted to: **Dr. Joseph M. Prospero, Chairman, Division of Marine and Atmospheric Chemistry, University of Miami, RSMAS, 4600 Rickenbacker Causeway, Miami, FL 33149-1098.** Deadline for applications is 15 July 1987.

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

RESEARCH ASSOCIATE POSITION available immediately for individual holding doctorate degree or equivalent in biomedical sciences or veterinary medicine (M.D., Ph.D., or D.V.M.) and having substantial theoretical and practical training as well as demonstrated proficiency in mammalian cell, bacterial, and retroviral research; demonstrated proficiency in working with hazardous biologic agents under carefully controlled laboratory conditions, and in supervising others under these conditions. Involves direct participation in hazardous biomedical research with infectious AIDS virus (HIV, HTLV-III/LAV). One year of training also required. Basic salary \$20,000 per annum. Qualified applicants should make inquiry to: **George M. Shaw, M.D., Ph.D., Division of Hematology and Oncology, University of Alabama at Birmingham, University Station, Birmingham, AL 35204.**

RESEARCH ASSOCIATE position available for Ph.D. (biochemistry) with major emphasis in intestinal epithelium and at least 2 years of postdoctoral experience. Duties include: Isolation and purification of the rat intestinal antipodal plasma membranes, performance of fluorescence polarization techniques, subnanosecond phase fluorimetry, laser densitometry, high performance liquid chromatography and thin-layer chromatography, column chromatography, gas liquid chromatography, analysis and interpretation of data, and preparation of manuscripts. Forty hours per week (9 a.m. to 5 p.m.), \$24,200 per year. Send résumés to: **Illinois Department of Employment Security, 401 South State Street-3 South, Chicago, IL 60605; attention: L. Donegan, Ref. #7091-L.**

RESEARCH SCIENTIST

An immediate opportunity is available in Wyeth's antiviral program to study the mechanism of action of antiviral compounds and to design new molecular targets for virus-drug interactions. The successful candidate will have background and experience in virology, enzymology and tissue culture techniques. A PhD in Microbiology or Biochemistry with a minimum of 2 years post-doctoral experience is required.

You will enjoy working in our modern, well-equipped facilities in Philadelphia's prestigious Main Line suburban area. Besides an environment which fosters discovery, we offer a competitive salary, excellent benefits, and superior career opportunities.

Respond immediately by forwarding your CV and salary requirements, in confidence, to: **Position #38, Recruitment Manager, Wyeth Laboratories, Inc., P.O. Box 8299, Philadelphia, PA 19101.** Equal Opportunity Employer, M/F/H/V. Responses encouraged.



CELL AND DEVELOPMENTAL BIOLOGISTS

The Department of Cell Biology and Neuroanatomy at the University of Minnesota seeks highly qualified applicants for positions in **Cell and Developmental Biology**. Appointments may range from **Assistant Professor** (tenure-track) to **Professor (tenured)**, depending upon qualifications (guidelines for appointment at each level will be sent on request). Areas of research interest of those appointed must complement ongoing programs in the department in the areas of **Cell and Developmental Biology**, since it is our intent to provide critical masses of scientists to interact with and extend existing strengths in the department and the University. Particular consideration will be given to those with interests in early vertebrate development (including cell-cell interactions and cell-extracellular matrix interactions), molecular structural biology (including macromolecular organization of cell organelles, the cytoskeleton, cell membranes, chromosomes), intracellular trafficking (including endocytosis, Golgi function, lysosomes), immunobiology as related to basic aspects of tissue and organ transplantation, or structural aspects of nuclear-cytoplasmic interactions. Applicants must have a relevant graduate degree (PhD, MD [or both] or equivalent foreign degree) with at least two years of productive postdoctoral experience. Technical expertise of successful applicants must be appropriate to their fields, but must show evidence of the broad use of many techniques for solving biological problems, which could include structural (light and electron microscopes and/or diffraction and image reconstruction), molecular biological (recombinant DNA technology, NMR) and biochemical approaches. Teaching will be related to cell and developmental biology courses taught to medical and dental students by the department. In addition, training of graduate students and teaching in appropriate graduate programs will be required.

Applications or nominations (to be received *no later than August 1, 1987*) should be sent to: Cell/Development Search Committee, Department of Cell Biology and Neuroanatomy, 4-135 Jackson Hall, 321 Church Street, S.E., Minneapolis, MN 55455.

The University of Minnesota is an equal opportunity educator and employer and specifically invites and encourages applications from women and minorities.

DIRECTOR Lawrence Livermore National Laboratory University of California Livermore, California

The President and The Regents of the University of California invite nominations and applications for the position of Director of the Lawrence Livermore National Laboratory of the University of California at Livermore, California. The appointment will be effective at such time as is mutually agreeable to the appointee and the University of California.

The Laboratory was established in 1952 and is located 40 miles southeast of San Francisco. It is one of three multipurpose laboratories operated by the University under contract with the United States Department of Energy.

The largest program at Livermore is research related to the design of nuclear weapons, with smaller programs in magnetically and inertially confined fusion, laser isotope separation, fossil energy research and biomedical research. Extensive research in the disciplines is conducted in support of the programs, including experimental and theoretical physics, computational science, chemistry, materials science and engineering.

The Director is responsible for the management of the Laboratory and reports to the President of the University. Within University policy, the Director exercises broad delegated powers in the overall administration of the Laboratory, which employs approximately 8000 staff members and has an annual operating budget of over \$800 million. The principal duty of the Director is the management of the Laboratory's programs. This includes defining their technical aspects, negotiating their size and content with federal officials in the executive branch, and executing them with the highest quality. In addition to this programmatic role, the Director is responsible for the institutional health of the Laboratory through stewardship of its human and physical resources. Candidates should have demonstrated administrative experience in the conduct of the affairs of substantial organizations and should have an extensive scientific and technical record.

Applications, accompanied by current résumés, and nominations may be addressed to:

The President
714 University Hall-LLNL
University of California
Berkeley, California 94720



and should be received no later than July 15, 1987 to be given full consideration.

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

DEAN UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY NEW JERSEY MEDICAL SCHOOL

The University of Medicine and Dentistry of New Jersey-New Jersey Medical School invites nominations for the position of Dean. This school is a founding unit of the University of Medicine and Dentistry of New Jersey system of Health Sciences and the Professions. Its modern campus in Newark is the site of considerable progress in its educational, research and service programs over the past 15 years.

The school seeks as Dean a physician with a strong administrative and academic background who wishes to lead in a contemporary metropolitan medical education and health care environment. The candidate must have practical knowledge of health care delivery and must recognize the crucial role of biomedical research as one of the prime determinants of academic quality. We also seek someone with an ability to represent the New Jersey Medical School both inside the UMDNJ system as well as with external constituencies.

The search committee is interested in receiving the curricula vitae and nominations of suitable candidates by August 1, 1987. Materials should be sent to: **Gerson Weiss, M.D., Chairman, Search Committee for Dean, UMDNJ-New Jersey Medical School, Office of the Dean, MSB C-690, 185 South Orange Avenue, Newark, New Jersey 07103-2757.**

Equal Opportunity/Affirmative Action Employer M/F/H/V.



POSITIONS OPEN

RESEARCH ASSOCIATE DERMATOLOGY: Conducts research in psoriasis; determines microbial product deposition in skin/controls; researches sialic acid levels; uses *Malassezia ovulis* models to assess new anti-psoriatic drugs; assesses antimicrobial agents in studies; prepares applications for investigational new drugs; investigates new dermatological preparations and advises on dermatological mycology. Must have: M.D. or equivalent and 1 year of experience including post residency experience in clinical dermatology, emphasis psoriasis; dermatologic mycology; use of animal models in assessment of antipsoriatic topical drugs; measurement of sialic acids in serum and erythrocytes; determination of microbial product deposition using immunofluorescent techniques; sets up/conducts double-blind studies. Forty hours per week; \$25,000 per year. Send ad and résumé to: **Jack Hiltzheim, Tennessee Job Service, 1295 Poplar, Memphis, TN 38104. Equal Opportunity Employer.**

RESEARCH FELLOW. Bioorganic NMR spectrometry. The American Health Foundation has recently acquired a 360-MHz wide-bore NMR spectrometer. We seek a postdoctoral fellow to operate this instrument and use it to develop a program in application of NMR to chemical carcinogenesis and/or early detection of cancer. Experience with high field NMR, particularly biological applications, is desirable. This fellowship can lead to a permanent position. Send curriculum vitae to: **Dr. Stephen S. Hecht, Chief, Division of Chemical Carcinogenesis, American Health Foundation, 1 Dana Road, Valhalla, NY 10595. An Equal Opportunity Employer M/F/H/V.**

RESEARCH SCIENTIST, PHARMACOLOGY: Conducts animal and human experiments re pharmacodynamics and pharmacokinetics of opiates and drugs used during anesthesia. Applies techniques including immunoassay and radioreceptor. Required: Ph.D. in pharmacology or pharmacology immunoassay development and 1 year of experience on job. Salary: \$30,000 per year. D.O.T. 041.061.074. Mail résumés to: **NYS Job Service, Order #NY8025589, 97-45 Queens Boulevard, New York, NY 11374.**

SCIENCE CONSULTANT

The American Heart Association (AHA), National Center, Dallas, Texas, has a staff position open for a **SCIENCE CONSULTANT**. This person will provide science information, interpretation, coordination, and guidance in its use for all AHA components and programs, including negotiating consensus among science volunteers on issues in cardiovascular science and medicine. The person will also provide scientific expertise to special task forces and committees and will assist in the design, development, and initiation of special science projects. Project responsibilities may include literature studies and the writing of statements and reviews. The candidate must have a Ph.D. or equivalent degree in one of the disciplines which apply to cardiovascular science. A minimum of 3 years of postdoctoral experience is also necessary. Please send curriculum vitae and three references by 3 July 1987 to: **Tom Rickman, American Heart Association, 7320 Greenville Avenue, Dallas, TX 75231. AHA is an Affirmative Action/Equal Opportunity Employer.**

STAFF SCIENTIST—A Colorado research institute is seeking a staff scientist whose responsibilities will include characterization of semiconducting and photovoltaic materials and devices using high resolution, analytical, and scanning electron microscopy; performing energy and wavelength dispersive x-ray microanalysis on a variety of state-of-the-art photovoltaic materials; investigating the electrical and luminescent behavior of defects using electronic beam-induced current and cathode luminescence techniques; developing high-resolution methods/techniques to solve structural problems in photovoltaic materials; operating and maintaining analytical electron microprobe including updating of existing computer software. The staff scientist will communicate results of his research through papers, reports, and conference presentations. Salary is \$36,000 per year for 40 hours per week. Applicants must have an M.S. in physics or chemistry or material science, and should be experts in high-resolution electron microscopy and analytical microscopy. Contact by résumé your local **Job Service Center**, and refer to **Job Order No. CO 2734097. We are an Equal Opportunity Employer.**

POSITIONS OPEN

SPECIALIST, BIOCHEMISTRY/BIOTECHNOLOGY

A specialist in biochemistry and biotechnology is sought for a challenging, well-paying post with a company in an attractive Sun Belt city. Candidates must have a Ph.D. in molecular biology or a related field, and a successful industry track record, preferably in new technology assessment. Previous experience in commercializing new products/processes would be helpful. Please send curriculum vitae to: **Box 96, SCIENCE.**

TEMPORARY LECTURER to teach courses in anatomy and physiology, pathophysiology, human genetics, preferably with Ph.D. in physiology and genetics. Nine-month appointment to start 1 September 1987, with possibility of summer appointment and appointments in subsequent years. Letter of application, curriculum vitae, transcripts, and three letters of recommendation by 2 July 1987 to:

**Dr. Francine Lancaster
1130 M.D. Anderson Boulevard
Houston, TX 77030
713-794-2340**

Texas Woman's University is an Equal Opportunity/Affirmative Action Employer.

AWARDS

RESEARCH AWARDS

The International Life Sciences Institute Research Foundation (ILSI Research Foundation) announces that two awards for basic research projects in toxicology and nutrition, each of \$100,000 over 3 years, will be made in 1988. The purpose of the awards is to encourage innovative, young investigators in basic biomedical sciences to apply modern knowledge and techniques to basic problems related to comparative toxicology or specific nutritional effects on growth and development. The closing date for applications is 15 October 1987. For further information, write: **ILSI Research Foundation, 1126 16th Street, NW, Washington, DC 20036.**

FELLOWSHIPS

LA TROBE UNIVERSITY AUSTRALIA

LA TROBE RESEARCH FELLOWSHIPS

Applications for research fellowships are invited from persons who have gained doctoral or equivalent qualifications within the last 5 years. A project must complement an existing area of research at La Trobe.

Fellowships will be awarded for a period of 24 months.

Salary offered is within the range of A\$24,013 to A\$27,507.

A fellowship will not be awarded to an applicant who holds a permanent appointment.

Applications must be made on the University's form which will be sent on request together with a copy of the conditions of award.

Enquirers should briefly indicate the research discipline of interest to them. The closing date for applications is 30 September 1987. For further information, write to: **The Staff Officer, La Trobe University, Bundoora, Victoria, Australia, 3083.**

Equal Opportunity is University Policy.

POSTDOCTORAL FELLOWSHIP GROWTH CONTROL AND PROTEIN PHOSPHORYLATION FRIEDRICH MIESCHER-INSTITUT BASEL, SWITZERLAND

Applications are invited to join a group studying the role of mitogen- and oncogene-induced protein phosphorylation in the activation of eukaryotic cell growth. Potential candidates require a strong background in the preparation of monoclonal antibodies and gene cloning or in the field of protein purification and biochemistry. The Institute is multidisciplinary, conducts only basic science, and is endowed with outstanding research facilities. The fellowship is for a maximum duration of 3 years. Applications should be addressed to: **Dr. George Thomas, Friedrich Miescher-Institut, P.O. Box 2543, CH-4002 Basel, Switzerland.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP: Funded opening in molecular and cellular biology of hematopoiesis in mice. Utilization of our genetically "handicapped" retroviral vectors for gene transfer. Analyses of gene expression, cell lineages, and mutations affecting blood cell development, function, and tumorigenesis. Send curriculum vitae, including names of references, to: **Dr. Beatrice Mintz, Institute for Cancer Research, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.**

POSTDOCTORAL FELLOWSHIPS IN NEUROIMMUNOMODULATION, beginning summer 1987, in the Ohio State University College of Medicine. The fellowship will provide research experience with the neuro-immuno-endocrine axis for 2 years as part of an active interdisciplinary group. Applicants with a Ph.D. in immunology should send curriculum vitae and three letters of reference to: **Dr. Ronald Glaser, Chairman, Department of Medical Microbiology and Immunology, 333 West 10 Avenue, Columbus, OH 43210.**

UNIVERSITY OF TENNESSEE (UT) SCIENCE ALLIANCE POSTDOCTORAL FELLOWSHIPS

Through its Centers of Excellence Program, the State of Tennessee is sponsoring postdoctoral fellowships in the biological sciences at UT Knoxville. The awards are for 1 year with the potential for renewal. The participating laboratories are conducting research funded by extramural support in such diverse areas as: yeast mating factors/peptide transport, coronavirus replication mechanisms, chemical senses in reptiles/ontogeny, sociality/ESS theory/behavioral genetics, immunoliposomes/ targeted drug delivery, endosymbiosis/membrane differentiation, metal toxicity/Alzheimer's disease, ciliary ultrastructure and function, molecular pathogenesis of viral infection; molecular biology of nitrogen fixation, polar oceanography, hormonal control of gene expression, pseudomonas vaccines/chemotaxis, and aminoglycoside resistance.


To apply, send a current curriculum vitae and three letters of reference to: **Science Alliance Postdoctoral Program, c/o Anne Upchurch, Walters Life Sciences Building M303, University of Tennessee, Knoxville, TN 37996-0830.**

RESEARCH/INSTRUCTOR FELLOWSHIP IN EVOLUTIONARY BIOLOGY

The Biology Department at Rice University seeks to fill the Huxley Research Instructorship in Biology. This is a 1-year appointment, renewable for a second year, for teaching and research in evolutionary biology. The candidate will be expected to have recently completed a Ph.D. Possible areas of interest will include evolution of sociality in insects, plant ecology, biochemical evolution, microbial genetics, physiological adaptation, population dynamics, or other topics which complement present faculty interests. Duties will include an opportunity to do some teaching related to one's specialty and collaborative research with faculty in the department. Applications, including curriculum vitae, a summary of research and teaching interests, and at least three letters of reference, are to be sent to: **Dr. Raymon Glantz, Department of Biology, Rice University, Houston, TX 77251; telephone: 713-527-4915. Application deadline is 1 July 1987. Rice University is an Equal Opportunity/Affirmative Action Employer.**

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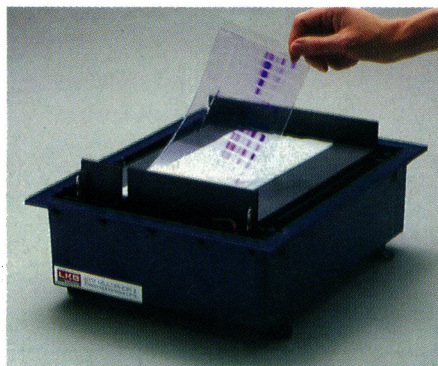
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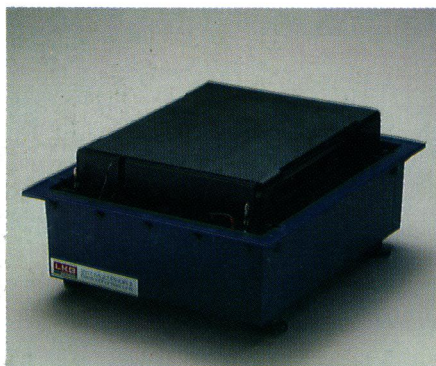
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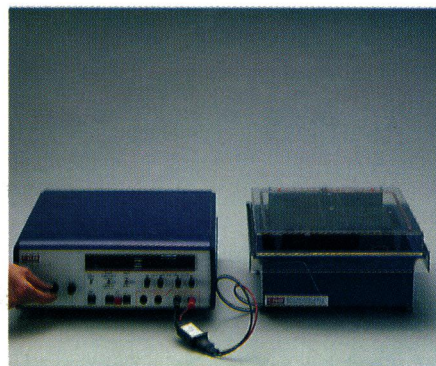
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