

These papers present models of the formation of these rocks that should be considered in studies of other granulite terranes. Three of the remaining papers are particularly interesting, since they present geochronologic data from two regions for which little detail has been published recently: Archean crustal rocks in the U.S.S.R. and in China. All three papers are based on modern techniques of geochronology, and one (Bibikova) argues against the existence of very ancient rocks (greater than 3.6 billion years old) previously reported from parts of these regions.

Although McLennan and Taylor have a paper in *Archean Geochemistry* that summarizes their model of the composition of the Archean crust, their book is a much more comprehensive treatment of crustal geochemistry. They begin with a revised model of the composition of the current upper continental crust, in which they survey all the available data bearing on the abundances of major elements, trace elements, and minor elements in the upper continental crust. This leads to a composition model that is based on the least uncertainties, from which they extend their discussions to less accessible parts of the crust. They then present their arguments concerning the composition of the total continental crust, taking into account heat-flow data and the age structure of the crust: Archean crust is different from younger crust, and bulk crustal composition models depend on inferred growth histories of the crust. Taylor and McLennan conclude that 75 percent of the present crust was formed in the Archean and 25 percent was formed more recently. Their estimate about the composition of the lower crust is dependent on their estimates about the upper and total crusts, since it is arrived at by subtracting one from the other.

Following the presentation of their models, Taylor and McLennan discuss several major questions that can be addressed with their data, including those concerning the uniformity of crustal composition with time, the provenance and tectonic significance of greywackes, the Archean crust, the Archean-Proterozoic transition, the growth rate of the crust, and crust-mantle relationships (including composition of oceanic crust). They also present a general model of the origin and evolution of continental crust from the Archean to the present, with particular emphasis on the differences between crustal processes that took place during the Archean and those that took place during Proterozoic and later times. They finish the book with a chapter on compositions of crusts from other planetary bodies, including the moon.

I was particularly impressed with the extensive quantity of data that has been com-

piled in this book and that is used to develop the crustal models. As the authors point out in several instances, the determination of a representative bulk composition for the continental crust or any significant part of it is very difficult and highly dependent on the model being used. Many readers of this book will probably want to quarrel with one fine point or another, but I believe that most general models of crustal compositions differ little in detail if they have been properly constrained with trace element, radiogenic isotope, and geophysical data. This book clearly presents the most comprehensive discussion of the subject to date, and I expect that it will be a classic reference for years to come. It is all the more useful as a potential textbook because it brings many aspects of geochemistry to bear on the subject, thus providing excellent starting points for many discussions of whole-Earth geochemistry.

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Reprints of Books Previously Reviewed

Alexander Fleming. *The Man and the Myth.* Gwyn Macfarlane. Oxford University Press, New York, 1985. Paper, \$9.95. Reviewed 225, 1140 (1984).

The Carnivores. R. F. Ewer. Comstock (Cornell University Press), Ithaca, NY, 1985. \$42.50; paper, \$17.95. Reviewed 181, 433 (1973).

Glimpsing an Invisible Universe. The Emergence of X-Ray Astronomy. Richard F. Hirsh. Cambridge University Press, New York, 1985. Paper, \$17.95. Reviewed 225, 1015 (1984).

Books Received

Eukaryotic Transcription. The Role of *cis*- and *trans*-acting Elements in Initiation. Yakov Gluzman, Ed. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, 1985. x, 200 pp., illus. Paper, \$30. Current Communications in Molecular Biology. From a symposium, Cold Spring Harbor, NY, March 1985.

Experimental Assessments and Clinical Applications of Conditioned Food Aversions. Norman S. Braveman and Paul Bronstein, Eds. New York Academy of Sciences, New York, 1985. xii, 441 pp., illus. Paper, \$100. Annals of the New York Academy of Sciences, vol. 443. From a conference, New York, April 1984.

The Experimental Basis for Absorbed-Dose Calculations in Medical Uses of Radionuclides. Recommendations. National Council on Radiation Protection and Measurements, Bethesda, MD, 1985. vi, 109 pp., illus. Paper, \$13. NCRP Report No. 83.

Extracellular Matrix. Structure and Function. A. Hari Reddi, Ed. Liss, New York, 1985. xxii, 435 pp., illus. \$96. UCLA Symposia on Molecular and Cellular Biology, New Series, vol. 25. From a symposium, Keystone, CO, April 1984.

An Introduction to Human Ecology Research on Agricultural Systems in Southeast Asia. A. Terry Rambo and Percy E. Sajise, Eds. xviii, University of the Philippines, Los Baños, 1984 (distributor, Environment and Policy Institute, East-West Center, Honolulu) xviii, 327 pp., illus. \$30; paper, \$15.

Ion- and Molecule-Selective Electrodes in Biological Systems. Jenő Havas. Springer-Verlag, New York, and Akadémiai Kiadó, Budapest, 1985. 238 pp., illus. \$34.50. Translation.

Ion Measurements in Physiology and Medicine. M. Kessler, D. K. Harrison, and J. Höper, Eds. Springer-Verlag, New York, 1985. xvi, 336 pp., illus. Paper, \$48.10. From a symposium, Burg Rabenstein, Switzerland, 1983.

The Island of South Georgia. Robert Headland. Cambridge University Press, New York, 1984. xvi, 293 pp., illus. \$39.50.

Japan's Science Edge. How the Cult of Anti-Science Thought in America Limits U.S. Scientific and Technological Progress. Shigeru Kimura. Wilson Center, Washington, DC, and University Press of America, Lanham, MD, 1985. 164 pp., illus. \$20.75; paper, \$8.20.

Language Intervention with Young Children. Marc E. Fey. College-Hill, San Diego, 1985. xii, 358 pp. \$24.95.

Larval Forms and Other Zoological Verses. Walter Garstang. University of Chicago Press, Chicago, 1985. xvi, 98 pp., illus. Paper, \$5.95. Augmented reprint, 1951 edition.

Laser Spectroscopy VII. T. W. Hänsch and Y. R. Shen, Eds. Springer-Verlag, New York, 1985. xv, 419 pp., illus. \$29.50. Springer Series in Optical Sciences, vol. 49.

The Mystery of Comets. Fred L. Whipple, assisted by Daniel W. E. Green, Smithsonian Institution Press, Washington, DC, 1985. xii, 276 pp., illus., + plates. \$24.95; paper, \$12.50.

Nature and Technology. Bioeconomics. John G. Strange. Graphics Communications Center, Appleton, WI, 1985. vi, 153 pp. \$12.50.

The Nature of Selection. Evolutionary Theory in Philosophical Focus. Elliott Sober. MIT Press, Cambridge, MA, 1985. xii, 383 pp., illus. Paper, \$12.50. Reprint, 1984 edition.

Perspectives on Minority Influence. Serge Moscovici, Gabriel Mugny, and Eddy Van Avermaet, Eds. Cambridge University Press, New York, and Editions de la Maison des Sciences de l'Homme, Paris, 1985. xiv, 260 pp. \$49.50. European Studies in Social Psychology. From a conference, Barcelona, Sept. 1980.

Philosophy and Spacetime Physics. Lawrence Sklar. University of California Press, Berkeley, 1985. xii, 336 pp. \$27.50.

The Physical Chemistry of Membranes. An Introduction to the Structure and Dynamics of Biological Membranes. Brian L. Silver. Allen and Unwin, Boston, and Solomon, New York, 1985. 396 pp., illus. \$60.

Rapid Detection and Identification of Infectious Agents. David T. Kingsbury and Stanley Falkow, Eds. Academic Press, Orlando, FL, 1985. xii, 296 pp., illus. \$29.50. From a symposium, Oakland, CA, Oct. 1983.

Resources and Society. A Systems Ecology Study of the Island of Gotland, Sweden. James Zucchetto and Ann-Mari Jansson. Springer-Verlag, New York, 1985. x, 246 pp., illus. \$69.50. Ecological Studies, vol. 56.

Restoring the Earth. How Americans Are Working to Renew Our Damaged Environment. John J. Berger, Knopf, New York, 1985. xii, 241 pp. \$16.95.

Reverse Osmosis/Ultrafiltration Process Principles. S. Sourirajan and Takeshi Matsuura. National Research Council Canada, Ottawa, Ontario, 1985. viii, 1113 pp., illus. C\$125.

The Rice Economy of Asia. Randolph Barker and Robert W. Herdt with Beth Rose. Resources for the Future, Washington, DC, 1985 (distributor, Johns Hopkins University Press, Baltimore). xx, 324 pp., illus. \$30; paper, \$12.

Ring-Opening Polymerization. Kinetics, Mechanisms, and Synthesis. James E. McGrath, Ed. American Chemical Society, Washington, DC, 1985. x, 398 pp., illus. \$74.95. ACS Symposium Series, 286. From a symposium, St. Louis, April 1984.

Risk Quantitation and Regulatory Policy. David G. Hoel, Richard A. Merrill, and Frederica P. Perera, Eds. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, 1985. xii, 368 pp., illus. \$67. Banbury Report 19. From a conference, Cold Spring Harbor, May 1984.

The Transfer of Spectral Line Radiation. C. J. Cannon. Cambridge University Press, New York, 1985. xiv, 541 pp. \$99.50.

Transport in Nonstoichiometric Compounds. George Simkovich and Vladimir S. Stubican, Eds. Plenum, New York, 1985. x, 563 pp., illus. \$85. NATO Advanced Science Institutes Series B, vol. 129. From an institute, University Park, PA, June 1984.

Products & Materials

Desiccator Cabinet

Model H42053 provides a dust- and moisture-free environment for the storage and protection of samples, chemicals, specimens, or electronic components. It is constructed of injection-molded, high-impact polystyrene for transparency, rigidity, and strength. Units may be stacked to conserve bench space. They may also be refrigerated. Bel Art Products. Circle 589.

Rapid Detection of Mycoplasma in Tissue Culture

A DNA probe assay is available that may be used to screen tissue cultures and media for mycoplasma contamination. The assay may be performed and the results analyzed in less than 1 hour. Artifacts from mycoplasma may affect the results of tissue culture experiments. Previous means of detection required days or even weeks to complete. In this assay, ribosomal DNA is detected by in-solution hybridization to a tritium-labeled complementary DNA probe. Hybridized probe is separated by adsorption onto hydroxyapatite and quantitated with a scintillation counter. All mycoplasma, achleplasma, and spiroplasma species tested have reacted positively with the probe. Gen-Probe. Circle 590.

Monoclonal Antibody for Lymphoma Identification

The Histoclon lymphoma set is a panel of four murine monoclonal antibodies: LN-1, LN-2, LN-3, and a control. They may be used to identify malignant B lymphoid proliferations in frozen sections or in paraffin-embedded sections. They are used with immunoperoxidase techniques. Monoclonal antibody LN-1 recognizes a surface membrane antigen found primarily on germinal center B lymphocytes. Monoclonal antibody LN-2 recognizes a nuclear membrane protein expressed in mantle zone and germinal center B lymphocytes as well as interdigitating histiocytes in reactive lymph nodes.

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card (on pages 674B and 774B) and placing it in a mailbox. Postage is free.

Monoclonal antibody LN-3 recognizes an HLA-Dr (Ia-like) antigen on the surface of B lymphocytes of the germinal center and mantle zone and interdigitating histiocytes in the interfollicular zones of the lymph node. T lymphocytes are not identified by LN-1, LN-2, or LN-3, but activated T cells may express HLA-Dr and may therefore be positive for LN-3. Used as a panel, these antibodies are useful in phenotyping malignant lymphomas because they classify diffuse lymphoid proliferations as T-cell or B-cell in origin and they establish the architecture of lymphoid proliferations. A complete explanation of the procedure accompanies each panel. Techniclone International. Circle 593.

Software for Fast Fourier Transform

Fourier Perspective II is designed for IBM PC XT or AT and compatible devices. It is useful for Fast Fourier Transform analysis, digital filtering, and frequency analysis. It is menu-driven with one- and two-dimensional operations including convolution, deconvolution, apodizing windows, power spectrum, cross spectrum, autocorrelation, cross-correlation, median window filter, and other manipulations. Graphics in two and three dimensions provide immediate visualization and printing. No additional programming or compiling is required. The system must have MS-DOS 2.0, 256 Kbyte of memory, two disk drives, IBM color card, or Hercules Monochrome graphics card, and 8087 math coprocessor is recommended. Alligator Transforms. Circle 594.

Software for Turbo Pascal Programming

Two packages are available on IBM PC-compatible disks in Pascal source code which may be compiled with IBM PC XT or AT Turbo and Turbo 87 Pascal revisions 3.0 and higher. The General Science and Engineering package (IPC-TP-006) includes procedures for general statistics, multiple regression, curve fitting, integration, Fast Fourier Transform, file transfers to Lotus 1-2-3, solving simultaneous equations, and matrix math. It also offers linear programming, data smoothing, and graphics. The Turbo Pascal Data Acquisition and Control package supports IBM DACA and Cyborg Isaac 411 and Cyborg Isaac 911 (IPC-TP-007) or the Metrabyte DASH-8 and DASH-16 (IPC-TP-008). Procedures are supplied for analog input and output, digital input and output, thermocouple linearization, PID control, real-time graphics, and

Fast Fourier Transform. Two menu-driven utility programs, Turbo LABLOG and Turbo HSDAS, may be used for data-logging, acquisition, process control, and real-time graphics. Quinn-Curtis. Circle 602.

Leak Detector

The Spectron 3000S-SF is designed to test small sealed devices rapidly. Single-button control implements calibration, timing, test-mode selection, ranging, start-up, and close-down. Leak rate is indicated in digital or analog modes. There are two optional chambering accessories. The Flip-Top chamber accepts the object on a baseplate. The chamber is lowered to make an effective seal. After the test, the chamber springs back for reloading. The Stick chamber is mounted for horizontal loading to prevent the loss of small objects in a vertical chamber. Edwards High Vacuum. Circle 592.

Literature

Photon-Counting Spectrofluorometer lists features and specifications of the SLM 8000C and its components and capabilities including new means of data processing. SLM Instruments. Circle 586.

HPLC Solvent-Handling System is devoted to Ultra-Ware reservoirs and accessories with a photograph and diagram system to describe various options for optimum arrangement. Kontes. Circle 587.

Cannula Systems explains in detail a line of single- and dual-fluid infusion swivels, attachment methods, and connection accessories for in vivo research. Instech Laboratories. Circle 588.

Mass Spectrometry is a wall chart that highlights the basic principles of the technique and describes the function of a mass spectrometer. Kratos Analytical. Circle 584.

Process Control and Measurement are treated in a set of four handbooks and encyclopedias with more than 30,000 products for scientists, engineers, and technicians. The four topics are: Temperature Measurement, Pressure and Strain, Flow and Level, and pH and Conductivity. Omega Engineering. Circle 585.

Reagents for Virology and Immunology details the Cytimmune line for research applications. Services are described for identification and assay of interferons, anti-interferons, and related substances. Lee Biomolecular Research Laboratories. Circle 603.

Chromatography includes products for sample preparation, columns and packings, plates and sorbents, solvents, and a wide range of materials for biotechnologic applications of separation science. J. T. Baker Chemical. Circle 604.

Personnel Placement

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Biotechnology/Business. B.S. chemical engineering with biotechnology minor (1983), M.B.A. with finance, marketing, and operations concentrations (1986). Biotechnology research, engineering, and business experience. Seeks highly challenging position demanding innovative, analytical, and managerial talents. Box 16, **SCIENCE**. 2/14, 21

Geologist, 32, M.Sc. geology, 1978; M.S. management 1982; D.Sc. geology 1985. Research in mineralogy of clay rocks, economic geology. Teaching experience. Seeks academic position. K. Szamalek, Department of Geology, Warsaw University, Zwirki-Wigury 93, Warsaw, Poland. X

Immunologist. Ph.D. Experienced research scientist with background in university and industrial R&D in cellular immunology, lymphokines, and hybridoma/monoclonal antibody technology. Expert tissue culturist with excellent publications and references. Seeking position in industry or academia. Box 17, **SCIENCE**. 2/14, 21

Freelance Photographer seeks contracts or full-time position with field researchers, natural history museum, or expedition. Specialist in field/studio techniques, with 4x5 and 35-millimeter cameras. B.A. zoology/geology; postdoctoral B.A. in botany/ecology. Extensive research experience, SCUBA-certified, mountaineering training, computer-literate. Box 20, **SCIENCE**. X

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Excellent opportunity for **ABD or RECENT PH.D.** Must have diverse background and ability to contribute to understanding of water column, benthic, and coastal ecology through literature search and review. Experience and expertise in phytoplankton/zooplankton and production/energetics desirable. Cartography helpful. Send résumé and names, addresses, and telephone numbers of three references to: **Mr. Melvin McCoy, Director of Personnel/Human Relations, University of Maryland Eastern Shore (UMES), Princess Anne, MD 21853.** Part-time (master's or Ph.D.) position may be available. *UMES is an Equal Opportunity Employer. Minority, women, and handicapped scientists are specifically encouraged to apply.*

ANALYTICAL CHEMISTRY. The Chemistry Department at Washington State University invites applications for two tenure-track faculty positions in analytical chemistry, effective August 1986. One position will be filled at the assistant professor level, while the second may be filled at the assistant or associate professor levels. Requirements include a Ph.D. degree in analytical chemistry or a closely related field, an ability to conduct a vigorous and innovative research program, and an interest in teaching at the graduate and undergraduate levels. Postdoctoral experience is desirable. Applicants in all areas of analytical chemistry will be considered, but some preference will be given to those whose research interests are complementary to those of the present faculty. Of particular interest is the area of bioanalytical chemistry. Applicants should forward curriculum vitae and a description of proposed research and arrange to have transcripts and three letters of recommendation sent to: **Professor H. H. Hill, Jr., Chairman, Analytical Search Committee, Department of Chemistry, Washington State University (WSU), Pullman, WA 99164-4630.** Review of application will begin immediately. The search will continue until the position has been filled. *WSU is an Equal Opportunity/Affirmative Action Employer. We encourage qualified minority, women, handicapped, Vietnam-era and disabled persons, and/or aged persons to apply and to identify themselves as such in their applications.*

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The Department of Biochemistry at Virginia Commonwealth University is seeking applicants for a tenure-track assistant professor appointment. The specific areas of research competence being sought are structure-function of proteins, including membrane assembly, with a strong basis in physical approaches. Other areas of interest are biocatalysis on solid supports or related aspects of biocatalysis and molecular/physical basis of neurobiology. The successful applicant will have demonstrated excellence in research and exhibit strong potential for establishing a superior research program complementary to existing research areas in the department. Candidates will also be judged on their ability to participate effectively in the teaching programs of the department including graduate, health professions, and undergraduate students. A doctoral degree and at least 2 years of postdoctoral experience in biochemistry, molecular biology, chemistry, or a related field is required. Applicants should submit curriculum vitae and a brief description of future research plans and arrange to have letters of recommendation from three qualified scientists sent to the search committee. Applications should be sent before 1 May 1986 to:

Search Committee
Department of Biochemistry
Box 614 Medical College of Virginia
Virginia Commonwealth University (VCU)
Richmond, Virginia 23298

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ASSISTANT/ASSOCIATE PROFESSOR, PHARMACOGNOSY. Academic year, tenure-track position in pharmacognosy (natural product chemistry, bioorganic chemistry), effective 1 September 1986. Ph.D. degree in pharmacognosy, natural product chemistry, biochemistry, or related area with some experience in microbiology. Pharmacy undergraduate degree and postdoctoral training desirable. Potential for or evidence of excellence in teaching and research is essential. For associate professor, ongoing funded research and at least 5 to 6 years of teaching experience required. Salary open and commensurate with qualifications and experience. Interested persons should submit curriculum vitae and the names of three references by 25 April 1986 to: **Dr. Yuzuru Shimizu, Assistant/Associate Professor (160048) Position, THE UNIVERSITY OF RHODE ISLAND, P.O. Box 357, Kingston, RI 02881-0357.** *An Affirmative Action/Equal Opportunity Employer, M/F.*

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The Department of Microbiology and Immunology, School of Medicine, University of North Carolina (UNC) at Chapel Hill, invites applications from outstanding individuals for an assistant or associate professor tenure-track position in the area of virology. Our department consists of 20 primary faculty members with strong research programs in prokaryotic and eukaryotic gene expression, molecular immunogenetics, tumor biology, molecular pathogenesis, and molecular virology. We seek an individual of demonstrated research productivity and teaching ability with a research program in the molecular and biochemical aspects of virology. Position available July 1986. *The University of North Carolina at Chapel Hill is an Equal Opportunity/Affirmative Action Employer. We encourage applications from and nominations of minority and female candidates; such persons may identify themselves voluntarily. Reply by 1 March 1986, with curriculum vitae and names and addresses of references to: P. Frederick Sparling, M.D., 804 Faculty Laboratory Office Building, UNC, Chapel Hill NC 27514.*

ASSOCIATE PROFESSOR (CHS)/Professor (CHS), University of Wisconsin-Madison. 50 to 75 percent appointment in the Department of Human Oncology responsible for clinical testing and use of interferons in neoplastic diseases. Lead research program and coordinate data analyses of interferon clinical studies. Develop clinical treatment programs in a malignancy with appropriate histology. Implement cooperative group studies of biologic response modifiers. Contribute to house staff and medical student training and carry a significant patient load. Send résumé to: **Dr. E. C. Borden, K4/410, CSC, The Wisconsin Clinical Cancer Center, 600 Highland Avenue, Madison, WI 53792.** *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

The Pennsylvania State University

Senior Vice President for Medical Affairs and Dean of the College of Medicine

The Milton S. Hershey Medical Center

The Pennsylvania State University invites applications and nominations for the position of Senior Vice President for Medical Affairs and Dean of the College of Medicine at The Milton S. Hershey Medical Center.

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Currently the campus of 380 acres provides the educational environment for 385 students of medicine, 38 graduate students and 219 resident physicians in specialty programs. There are 325 faculty in the basic and clinical sciences, and resources devoted to research are substantial. The University hospital provides all levels of care in its 344 beds.

As the senior executive officer of the Medical Center, and the principal academic leader of the College of Medicine, the Senior Vice President and Dean reports directly to the Office of the President. The Senior Vice President and Dean is responsible for all academic, scientific, and clinical operations of the Medical Center, and for the general management of fiscal planning, budgets, facilities, programs, and personnel.

CRITERIA FOR SELECTION

The following criteria will be used to aid in selecting a Senior Vice President for Medical Affairs and Dean of the College of Medicine:

1. Proven scholarship and accomplishment in a medical sciences discipline, and professional accomplishments that qualify for a professorship in the appropriate department of the College of Medicine.
2. Demonstrated administrative ability, leadership in academic policy decision making, program development, and fiscal planning and management.
3. A commitment to the philosophy and responsibilities of a major, public research university.
4. Demonstrated ability to attract human and financial resources.

The closing date for applications is March 17, 1986. Nominations and letters of application should be sent to:

**Dr. William C. Richardson, Chairman
College of Medicine Search Committee
The Pennsylvania State University
Room 201, Old Main SC
University Park, Pennsylvania 16802**

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Molecular Biology

Squibb is recognized as an international leader in the research and development of pharmaceutical products. Due to our continued growth, we are currently seeking two molecular biologists to join our research efforts in the Cholesterol Metabolism and Fungal Genetics Groups. Both positions require a Ph.D. or M.D. and one to three years of related postdoctoral experience.

Cholesterol Metabolism

Candidates should have experience in cloning and expression of mammalian genes and an interest in regulatory mechanisms affecting lipoprotein receptor expression and/or cholesterol synthesis. This position offers considerable scope for involvement in interdisciplinary approaches to the study of cholesterol metabolism and the development of novel therapeutic approaches for the treatment of hyperlipidemia.

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Candidates should have a knowledge of fungal molecular genetics and an interest in the cell biology of fungi. The successful candidate will join a group with interests in the use of fungal systems as models for expression and control of biochemical pathways in higher eukaryotes and the study of mechanisms of fungal diseases through the genetic manipulation of pathogenic fungi.

Both positions are located at The Squibb Institute for Medical Research in Princeton, NJ, a pleasant, semi-rural setting convenient to both Philadelphia and New York City. We offer the opportunity for exceptional scientists to pursue stimulating careers.

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RESPONSIBILITIES:

- serve as chief administrative officer of the Alabama Agricultural Experiment Station.
- establish priorities and optimize allocation of state and federal agricultural research resources.
- with the Dean of the College of Agriculture, coordinate cooperative agricultural research at Auburn University.
- provide leadership for the statewide research program at the Alabama Agricultural Experiment Station.
- prepare and present budgets and reports of the Experiment Station.
- maintain an effective working relationship with agricultural commodity groups, agricultural leaders, and government officials for program planning and coordination.
- assure proper and effective coordination of research with appropriate federal and state agencies and other state experiment stations.
- maintain cooperative working relationships with extension and teaching programs of Auburn University.
- foster interdisciplinary research in resolution of agricultural problems.

QUALIFICATIONS: A Ph.D. in an agricultural science or closely related field is required. An ability to effectively communicate with faculty, staff, students, commodity groups, and government officials is essential. Thorough understanding of the land grant agricultural experiment station system and demonstrated excellence in administration are necessary to be effective in this position.

SALARY: The salary is competitive and will be commensurate with qualifications and experience.

CLOSING DATE: March 15, 1986 or until position is filled.

APPLICATION PROCEDURE: Both nominations and direct applications are welcomed. Applications, a complete resume and names, addresses, and phone numbers of references should be sent to:

Dr. Richard L. Guthrie
Chairman, Search Committee
College of Agriculture
107C Comer Hall
Auburn University, AL 36849-4201

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AFFIRMATIVE ACTION EMPLOYER

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The Biomedical Research and Clinical Medicine Program is seeking applicants for the position of Health Scientist Administrator (Biological Sciences) to serve as a program director for the Genetics Program with contributing responsibilities to Cell Biology, Molecular Biology, and Theoretical Biology. Specific responsibilities include developing, managing, coordinating and monitoring a program of research grants, training grants, fellowships, and contracts. Applicants should have completed all requirements for a Ph.D. (or equivalent doctoral degree) in the biological or allied health sciences. Additionally, applicants must have experience which clearly demonstrate ability to work independently in planning, organizing, and conducting genetic research as well as to administer a research program; demonstrated expertise in some area of molecular genetics is preferred. The position will be filled through the Civil Service or Commissioned Corps of the U.S. Public Health Service. The grade of the position is a GS-12/13/14 with a salary range of \$31,619-\$44,430 p.a., depending on the qualifications of the applicant selected. Benefits include a retirement plan, health and life insurance, sick and annual leave. Duty Station—Bethesda, Maryland. U.S. Citizenship required.

Any applicant not currently employed in the Federal Government as a Health Scientist Administrator will be required to obtain an eligible notice of rating. Submit application (SF-171), curriculum vitae, and bibliography to: Ms. Sara Benesch, Personnel Office, National Institute on Aging, Building 31-Room 2B63, National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland 20892. Applications must be received or postmarked by March 31, 1986. Call Ms. Benesch at (301) 496-5347 for further information.

NIH IS AN EQUAL OPPORTUNITY
EMPLOYER

POSITIONS OPEN

THE UNIVERSITY OF WESTERN ONTARIO Department of Plant Sciences

Applications are invited for a tenure-track position at the assistant professor level in the area of microbiology. Preference will be given to well-qualified candidates with training in phycology. Experience in molecular biology is desirable; however, we are seeking the best candidate and related interests will be considered. The applicant will be expected to establish a strong research program, supervise graduate students, teach in phycology/microbiology courses, and assist in the development of molecular biology in the department. Good facilities and opportunities for research are available and excellent opportunities for collaborative research exist. The position will be available on 1 July 1987, subject to availability of funds. Applicants should have a Ph.D. and at least 2 years of postdoctoral training. Applications accompanied by a detailed curriculum vitae and three letters of reference should be forwarded to: **The Chairman, Department of Plant Sciences, The University of Western Ontario, London, Ontario Canada N6A 5B7, by 31 August 1986. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.**

An Equal Opportunity Employer

ASSISTANT PROFESSOR—BIOLOGY

A 1-year position to team-teach general biology for two semesters and a course in human anatomy and physiology for nonmajors the first semester and in the second semester teach a course in your specialty for majors, preference given to those able to teach either ecology, botany, or genetics. Ph.D. and demonstrated teaching excellence required. Facilities and space are available for research. Submit curriculum vitae and names of three references before 4 April 1986 to: **Daniel E. Bowe, Chairman, Biology Department, Benedictine College, Atchison, KS 66002.**

ASSISTANT PROFESSOR OF BIOLOGY: Tenure-track position for broadly trained microbiologist to teach in nursing program at Venango Campus in Oil City. Will teach microbiology, human anatomy and physiology, and basic biology. Teaching of primary importance. Professional development expected. Research not required, but encouraged. Ph.D. preferred, with primary emphasis in microbiology and experience in anatomy and physiology. Deadline: 15 March 1986. Send letter of application, curriculum vitae, transcripts, and three letters of recommendation to: **Dr. William Barnes, Chairman, Search Committee, Biology Department, Clarion University of Pennsylvania, Clarion, PA 16214. Clarion University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer.**

CARDIOVASCULAR PHYSIOLOGIST ASSISTANT PROFESSOR

The Department of Medical Physiology, College of Medicine, Texas A&M University, invites applications from individuals specializing in **NEURAL MECHANISMS OF CARDIOVASCULAR REGULATION**. Candidates must demonstrate ability to conduct a vigorous research program. The tenure-track appointee will join a physiology faculty deeply involved in cardiovascular research and will participate in its medical and graduate training programs. Send curriculum vitae, summary of research interests, and names of three references to: **Dr. Harris J. Granger, Professor and Head, Department of Medical Physiology, College of Medicine, Texas A&M University, College Station, Texas 77843. Texas A&M University is an Equal Opportunity Employer.**

ASSISTANT PROFESSOR, MICROBIOLOGIST. The Southeastern College of Osteopathic Medicine (SECOM) invites applications for a faculty position in microbiology. The successful candidate will be expected to teach a course in medical virology, help supervise microbiology teaching laboratories, and pursue individual research interests. Please submit a letter of application, a résumé, and the names of three references to: **Harold E. Laubach, Ph.D., Chairman, Department of Microbiology, Southeastern College of Osteopathic Medicine, 1750 N.E. 168th Street, North Miami Beach, FL 33162. SECOM is an Affirmative Action/Equal Opportunity Institution.**

POSITIONS OPEN

ASSISTANT PROFESSOR—PHARMACOLOGY CASE WESTERN RESERVE UNIVERSITY

The Department of Pharmacology of Case Western Reserve University invites applications for a tenure-track position as an assistant professor. Research interests of applicants may be in any area of modern cellular and molecular pharmacology, but those complementing the interests of current faculty in molecular endocrinology, cellular neurobiology, ion transport, or protein structure-function relationships are especially invited. Senior candidates with outstanding credentials may apply for a higher level appointment. The successful candidate will be expected to establish a strong, independent research program. Postdoctoral experience required. Please submit curriculum vitae, a concise statement of research accomplishments, and future interests and names of three references to: **Dr. M. E. Maguire, Department of Pharmacology, School of Medicine, Case Western Reserve University, Cleveland, Ohio 44106. An Affirmative Action/Equal Opportunity Employer**

ASSISTANT PROFESSOR (Pharmacology). Salary: commensurate with qualifications and experience. Tenure-track position. Minimum qualifications: applicants should hold the Ph.D. and/or M.D. degree(s); at least 2 years of postdoctoral or equivalent experience and have demonstrated the ability to conduct independent research. Preference will be given to applicants whose research interests complement current faculty expertise including toxicology, cardiovascular and pulmonary pharmacology, autocrine, neuro- and immunopharmacology, and clinical research. Candidates must be committed to developing a strong, extramurally funded research program and teaching medical and graduate students. Submit curriculum vitae, a statement of research interests, and the names of three references by 31 March 1986 to: **Gary O. Rankin, Ph.D., Professor and Chairman, Department of Pharmacology, Marshall University School of Medicine, Huntington, WV 25701-2901. Marshall University is an Equal Opportunity/Affirmative Action Employer.**

BIOCHEMIST. Research associate or postdoctoral fellow. Experience in chromatography desirable. Work involves isolations, structural, and immunochemical characterization of tissue-derived glycopeptides. Salary is derived from NIH grant and depends on experience. **Volker Dube, M.D., Evanston Hospital, 2650 Ridge Avenue, Evanston, IL 60201.**

BIOLOGIST: to supervise and conduct biochemical analysis and evaluate data relating to stress and/or exercise physiology research (human and animal work). Must be proficient in high-pressure liquid chromatography and spectrophotometry (A.A., U.V., and so forth). Knowledge of separation, extraction, purification, and cell-counting techniques necessary. M.S. in biology required. \$17,987 per year; 40-hour week. Mail résumé and copy of ad to: **Department of Employment and Training, 1123 North Eutaw Street, Room 201-B, Baltimore, MD 21201; job order Number 5012418; job location: Bethesda, Maryland.**

BIOMATHEMATICIAN—FULL PROFESSOR

Nominations and applications are invited for a tenured position in the Department of Biomathematics, University of California, Los Angeles (UCLA) School of Medicine. We are seeking an outstanding, productive theoretician in the biomedical sciences capable of carrying on an independent research program and training graduate students. Priority areas for hiring are the neurosciences and physiology, although strong candidates with other biomedical interests are encouraged to apply. Important considerations include the realism and relevance of one's biological modeling, command of appropriate applied mathematical techniques, ability to communicate findings to colleagues and students, and potential for interaction with existing faculty within the department and medical school. Salary is negotiable. Send curriculum vitae, statement of research and teaching interests, and four references for letters of evaluation to:

**Kenneth Lange, Chair
AV-617 CHS
Department of Biomathematics
University of California
Los Angeles, CA 90024**

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

ASSISTANT MANAGER TECHNICAL SERVICES

Amersham Corporation, a leading manufacturer of radioactive products for medicine, research and industry has an immediate opening in the Research Products Marketing Department.

We are looking for an ASSISTANT MANAGER TECHNICAL SERVICES for our IMMUNOLOGY products. Duties include answering technical inquiries from our customers about our radioactive chemicals, screening reagents, and related immunology products. Minimum requirements are an MS or PhD Immunology, Neurobiology, or Biochemistry with practical experience in immunochemistry and in the use of screening reagents and radioactive tracers. Good communication skills are a must. We are offering an excellent starting salary, attractive benefits package, and the opportunity for professional growth. Send your resume with salary requirements in confidence to:

C. L. Bernacchi
Employment Manager

AMERSHAM CORPORATION

2636 S. Clearbrook Drive
Arlington Heights, Ill. 60005
An Equal Opportunity Employer M/F

Amersham

POSTDOCTORAL RESEARCH POSITIONS

POSTDOCTORAL APPOINTMENTS are available in the Laboratory of Pulmonary Pathobiology at the National Institute of Environmental Health Sciences, National Institutes of Health, Public Health Service, Research Triangle Park, North Carolina. The major topics of investigation are:

Molecular Mechanisms of Cell Differentiation (Dr. Jetten).
-Molecular analyses of gene expression
-Action of erb-B and other oncogenes on the commitment to differentiation.
-Molecular mechanisms of action of retinoids.

Multistage Transformation of Airway Epithelial Cells, Cellular and Molecular Studies (Dr. Nettesheim).

-Altered stem cell renewal capacity of early transformants
-Changing responsiveness to inducers of differentiation and growth regulators

Cellular and Molecular Mechanisms of Neoplastic Transformation (Dr. Barrett).

-Role of mutagenesis in carcinogenesis
-Role of oncogenes and tumor suppressor genes in multistep carcinogenesis
-Mechanisms of asbestos carcinogenicity

Cellular and Biochemical Regulation of Pulmonary Secretions (Dr. Hook).

-The role of Type II cell hypertrophism in surfactant regulation
-Identification and function of Clara cell secretions

Cellular and Biochemical Mechanisms of Asbestos-Induced Lung Disease (Dr. Brody).

-Phagocytosis and cytotoxicity
-Particle binding to cell membranes
-Macrophage-derived growth factors
-Complement-dependent and macrophage chemotactic factors

Salary range \$16,000-\$41,358 and is commensurate with experience. Position information and qualification requirements may be obtained by contacting:

Dr. Paul Nettesheim
Laboratory of Pulmonary Pathobiology
National Institute of Environmental Health
Sciences, P.O. Box 12233, Maildrop D2-01
Research Triangle Park, NC 27709
Phone: 919-541-3540

Please specify area of interest and send CV, bibliography and three letters of reference to the above address.

AN EQUAL OPPORTUNITY EMPLOYER

VIROLOGIST

The Hyland Therapeutics Division of Travenol Laboratories has an immediate opening for a virologist with a PhD and a minimum of 2 years' past doctoral experience in the molecular biology of viruses.

The successful applicant will develop an ongoing program of basic research on human viruses and will also support several mission-oriented projects. The latter will include removal or inactivation of viruses or viral nucleic acids from therapeutic products produced from human plasma, from human hybridoma cultures and from cultures of other mammalian cells modified by RDNA techniques.

Candidates should have demonstrated skills in nucleic acid chemistry and a working knowledge of mutagenesis and oncogenesis. Salary and responsibility are commensurate with skills and experience.

For consideration, send your resume and the names of 3 references to: Dr. John A. Hooper.



**HYLAND
THERAPEUTICS
DIVISION**
Travenol Labs, Inc.

1710 Flower Ave., Duarte, CA 91010
An equal opportunity employer

BIOCHEMICAL PHARMACOLOGIST/ NEUROCHEMIST

Hoechst-Roussel Pharmaceuticals, Inc., a rapidly growing subsidiary of American Hoechst Corporation, part of the world's largest pharmaceutical companies, has a scientifically challenging career opportunity for a Biochemical Pharmacologist/Neurochemist interested in joining our expanding CNS research effort.

This position, in a state-of-the-art laboratory, offers excellent potential for professional recognition and career development. Responsibilities involve both basic research and drug discovery programs. The successful candidate would be joining a multi-disciplinary group investigating new therapeutic approaches to Alzheimer's disease and other neurochemical functional disorders.

Qualified applicants should have a Ph.D. in Biochemistry/Molecular Pharmacology and postdoctoral or industrial experience in a neuroscience-related field with a working knowledge of radioreceptor and nucleotide messenger assays. Previous experience as well as an interest in deoxyglucose and/or neurotransmitter receptor autoradiography would be an advantage.

Please send resume with salary history, in confidence, to: Mr. James Hamilton, Department of Human Resources, Section 50, Hoechst-Roussel Pharmaceuticals, Inc., Route 202-206 North, Somerville, New Jersey 08876. An Affirmative Action Employer M/F/H.

Hoechst



POSITIONS OPEN

ASSISTANT RESEARCH SCIENTIST. Position immediately available to study structure-function relations in phospholipases acting on phospholipids of natural membranes. Ph.D. in biochemistry with experience required in protein modification and analytical techniques, including HPLC. Salary to be discussed. Please send résumé to: **Joan Harmon, Personnel Department, New York University Medical Center, 317 East 34 Street, 7th Floor, New York, NY 10016.** An Affirmative Action/Equal Opportunity Employer, M/F.

BACTERIOLOGIST

Praxis Biologics, a new results-oriented health care products company committed to disease prevention, has an immediate growth-related opportunity available within our research organization. You will assist in ongoing research associated with a vaccine currently under development. In addition, you will perform research on the immune response to bacteria and help develop various assays relating to the research.

To qualify, you must have a B.S. in bacteriology or microbiology, and a minimum of 5 years of laboratory research experience dealing with bacteria and/or pathogenic bacteriology is essential. Experienced in immunology is highly desirable.

If you are a self-starter who would enjoy the challenge of being on the ground floor of an exciting new organization, we would like to talk with you. Send résumé, including salary requirements, in confidence to:

**Human Resources Manager
Praxis Biologics
300 East River Road
Rochester, NY 14623**

An Equal Opportunity Employer, M/F/H

BIOENGINEERING, UNIVERSITY OF UTAH. The Department of Bioengineering at the University of Utah is currently seeking candidates for a tenure-track faculty position beginning September 1986. The specialty areas appropriate to this position include, but are not limited to, the following: biomaterials, neurostimulation, prosthetics, artificial organs, and bioinstrumentation. The appointment may be at the level of assistant, associate, or full professor, depending upon the experience of the candidate. Applicants should possess (by September 1986) a Ph.D. degree in a discipline related to bioengineering research. Applicants should send a complete résumé and the names of three professional references to: **Dr. Douglas A. Christensen, Chairman, Department of Bioengineering, 2059 MEB, University of Utah, Salt Lake City, UT 84112,** preferably before 15 March 1986, or until the position is filled. An Equal Opportunity/Affirmative Action Employer.

CELL AND MOLECULAR BIOLOGY Columbia University

The Department of Biological Sciences at Columbia University in New York City is expanding its group in cell and molecular biology with new appointments in one or more of the following areas: molecular genetics; protein and nucleic acid structure and function; and the structure, function, and genetics of cellular organelles. Laboratory space is available for several new faculty members in the Sherman Fairchild Center for the Life Sciences which is well equipped with individual and shared research facilities including animal quarters, modern electron microscope, and computer systems, as well as analytical and synthetic facilities for protein and nucleic acid research. The appointments will be made at a level appropriate to the qualifications of the successful candidates, who will be individuals who can demonstrate a high level of scientific excellence and productivity, as well as a commitment to teaching at both the undergraduate and graduate levels. Applications should include curriculum vitae, copies of most significant publications, and a summary of research goals. Applicants for junior positions should also request that letters from three references be sent in support of their application. Initial review will be made of those applications received by 15 March 1986. Send inquiries and applications to: **Professor Cyrus Levinthal, Chairman of the Cell and Molecular Biology Search Committee, Department of Biological Sciences, 600 Sherman Fairchild Center, Columbia University, New York, NY 10027.** Women and members of minority groups are especially encouraged to apply. Columbia University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

CELL BIOLOGY AND ANATOMY POSITION AVAILABLE

A faculty position is available at the associate professor level for an individual with 10 to 15 years of experience past the awarding of a Ph.D. degree in the area of cell biology/cell physiology. The specific research area of qualified candidates should be in nonmuscle cell motility with emphasis on the structure, function, and subcellular localization of contractile proteins. Furthermore, the candidate should exhibit experience in attempting to achieve the highest possible resolution of these proteins, especially the myosins, within the cytoplasm of moving cells, using immunofluorescence techniques. The candidate should have at least 25 to 30 publications in critically reviewed scientific journals. In addition, candidates should have 15 to 17 years of teaching experience in the general areas of cell biology/cell physiology at the undergraduate, graduate, or medical school levels. Applications should be postmarked no later than 4 April 1986. Interested persons should send their complete curriculum vitae and have a minimum of three knowledgeable referees send letters directly to: **Dr. Robert D. Goldman, Chairman, Department of Cell Biology and Anatomy, The Medical School, Northwestern University, 303 East Chicago Avenue, Chicago, Illinois 60611.** Northwestern University is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.

UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO, CHAIR OF DEPARTMENT OF BIOCHEMISTRY.

Nominations and applications are invited for the position of **CHAIR AND PROFESSOR** with tenure. A starting date of September 1986 is preferred. Candidates should have a distinguished research record, experience in teaching students of medicine and/or other health science professions, and demonstrated leadership in administrative abilities. Applications with curriculum vitae or nominations should be sent by 15 March 1986 to: **Dr. Edward J. Masoro, Search Committee for Biochemistry Chair, Department of Physiology, University of Texas Health Science Center, San Antonio, Texas 78284-7756.**

The University of Texas Health Science Center is an Affirmative Action/Equal Employment Opportunity Employer.

CLINICAL MICROBIOLOGIST

Individual sought to be director of clinical microbiology at Children's Hospital. Will hold title of assistant professor of pediatrics at the University of Pennsylvania, which is an Equal Opportunity/Affirmative Action Employer. Ph.D. degree preferred. Send curriculum vitae to: **Camillus L. Witzleben, M.D., Director, Clinical Laboratories, Children's Hospital of Philadelphia, 34th and Civic Center Boulevard, Philadelphia, PA 19104.**

CLINICAL RESEARCH BIOCHEMIST with M.S. chemistry/biochemistry laboratory operation in medical clinic. Minimum 1 year of research fellowship with 2 years of research or teaching experience evidenced by publications. Must have clinical laboratory and independent research project capabilities. Must be bilingual in Hindi and English. Salary: \$28,200 per year. Job in Bellflower, California. Send this ad and résumé to: **P.O. Box 9560, Job No. SK6961, Sacramento, CA 95823-0560,** no later than 1 March 1986.

COGNITIVE SCIENCE—UNIVERSITY OF CALIFORNIA, SANTA BARBARA: Anticipated tenure-track position in cognitive science, effective fall 1986. Candidate's research should focus on computational modeling of aspects of cognition, perception, or motor control. Expertise in the area of neural net modeling and parallel processes is of special interest. This is an interdisciplinary appointment involving affiliation with the cognitive science program and relevant academic departments. Ph.D. and evidence of excellence in research and teaching are required. Salary and level will depend on the candidate's qualifications. Exceptionally well-qualified persons whose background and experience warrant a senior-level appointment are encouraged to apply. Submit curriculum vitae and reprints and arrange for three letters of recommendation to be sent to: **Cognitive Science Search Committee, CORI, 2204 North Hall, University of California, Santa Barbara, CA 93106.** Applications must be received by 30 March, 1986. Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

CELL BIOLOGIST

The Department of Biology at the University of Utah seeks candidates for a tenure-track faculty appointment in plant or animal cell biology. The position is available for July 1986, but candidates interested in later starting dates are welcome to apply. The successful candidate will be expected to establish a vigorous research program and to contribute to undergraduate and graduate teaching programs. We particularly desire a colleague who can establish mutually beneficial interactions with existing research groups. Several recent appointments and increasing cooperation with departments in the adjacent medical school offer the opportunity to participate in the continued development of an already strong program.

Interested persons should send a letter of application, curriculum vitae, and three letters of recommendation or the names of three individuals willing to serve as references. The closing date for receipt of applications is 1 May 1986. Address all materials to:

**Dr. Mario R. Capecchi
Department of Biology
University of Utah
Salt Lake City, UT 84112**

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

SEARCH REOPENED

In 1985, the Pediatric Research Institute advertised for **CELL AND MOLECULAR BIOLOGISTS** working in areas broadly related to the diseases of children. Since then, we have recognized that an important unifying research theme for the institute will be eukaryotic **DEVELOPMENTAL BIOLOGY.** To achieve this end, the search is being reopened, this time focusing on M.D.'s and Ph.D.'s with expertise in the following areas: cell-cell interaction, cell-matrix interaction, developmental endocrinology, and/or gene expression. The successful candidate should have at least 2 to 3 years of postdoctoral experience; working knowledge of one or more of the following laboratory techniques: recombinant DNA, production and use of monoclonal antibodies, protein sequencing/peptide synthesis, and gel electrophoresis; and credentials indicative of research productivity and potential. Interested parties should send a copy of their curriculum vitae, a letter outlining their research goals, and the names of three referees to: **PRI-DB Search, Cardinal Glennon Children's Hospital, P.O. Box 15708, St. Louis, MO 63163.**

Cardinal Glennon Children's Hospital is an Equal Opportunity Employer and does not discriminate on the basis of race, creed, color, sex, age, religion, national origin, ancestry, or handicap.

DEAN COLLEGE OF SCIENCE OREGON STATE UNIVERSITY

Applications and nominations are invited for the position of dean of the College of Science. Candidates are expected to have an earned doctorate or equivalent in a recognized scientific discipline, with distinction in scholarship, teaching, and academic leadership; demonstrated experience in research, academic and classified personnel administration, budgets and fiscal management, and policy formulation; demonstrated experience and skills in campus communications and fostering and maintaining liaison with governmental agencies, professional associations, and the public. Must be eligible for appointment as a professor with indefinite tenure in a department of the college. Position begins 1 July 1986, or as soon thereafter as possible. Salary is commensurate with qualifications and experience. Closing date is 11 April 1986. Complete applications must include a detailed résumé, a statement of professional goals, administrative philosophy, and interest in this position, as well as names, addresses, and telephone numbers of five references. Nominations and applications should be sent to:

**Dr. Thomas J. Maresh
Science Dean Search Committee
Department of Geography
Oregon State University
Corvallis, OR 97331
Telephone: 503-754-3141**

Oregon State University is an Equal Opportunity/Affirmative Action Employer and complies with Section 504 of the Rehabilitation Act of 1973. We encourage applications from women and minorities.

SENIOR CELL BIOLOGIST

BURROUGHS WELLCOME CO., an innovative pharmaceutical company, in Research Triangle Park, North Carolina, is seeking an experienced Cell Biologist to apply recombinant DNA technology within a range of research programs related to metabolism of nucleic acid precursors.

The successful candidate will have Ph.D. or equivalent with a strong background in biochemistry, demonstrated ability in both recombinant DNA technology and vertebrate cell culture, and be able to interact effectively with scientists from a variety of disciplines.

BURROUGHS WELLCOME CO. offers a competitive salary, a comprehensive company-paid benefit package and stimulating environment for scientific research. Qualified minority, female, veteran and handicapped individuals are encouraged to apply. Candidates should submit curriculum vitae with salary requirements to:

Employment Supervisor, BURROUGHS
WELLCOME CO., 3030 Cornwallis
Road, Research Triangle Park,
NC 27709.



**BURROUGHS
WELLCOME CO.**



Wellcome

An Equal Opportunity/Affirmative Action Employer

NATIONAL INSTITUTES OF HEALTH NATIONAL INSTITUTE OF ARTHRITIS, DIABETES, AND DIGESTIVE AND KIDNEY DISEASES (NIADDK) DIVISION OF KIDNEY, UROLOGIC, AND HEMATOLOGIC DISEASES

Academic Nephrologist — BC/BE with interest in administering grant programs and continuing an active basic research program. Full-time position. Includes developing, monitoring, and evaluating kidney and urology problems. Adequate time available to pursue research interests. Salary is negotiable, commensurate with qualifications and experience. How to apply: submit a Personal Qualifications Statement, (SF-171), curriculum vitae, bibliography, and names of three references to:

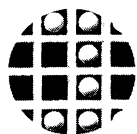
Mr. Clifford Moss
Personnel Officer, NIADDK
Building 31, Room 9A34
9000 Rockville Pike
Bethesda, Maryland 20892
Phone (301) 496-4231

NIH is an equal opportunity employer; women and minorities are encouraged to apply.

The Invitron Corporation is a company committed to the large scale production of cell culture-derived proteins of pharmaceutical importance. Due to rapid expansion, a unique career opportunity exists for a **FORMULATION BIOCHEMIST** to assume responsibility for the development of buffer formulations and bulk manufacturing procedures including development of lyophilization cycles that maximize the stability of purified proteins. Additional responsibilities include the development of stability protocols and collection of data for process validation.

The successful candidate will have an M.S. or Ph.D. in Biochemistry; 3-5 years experience in formulation of proteins in the pharmaceutical industry; and have strong interaction with a variety of disciplines, including protein purification and characterization, and assay development. A knowledge of pharmacology and the application of excipients is a plus.

Salary and position level commensurate with experience and education. We offer an excellent benefits and relocation package and an opportunity for professional growth. Qualified candidates should submit a detailed resume, including publications that demonstrate innovative research in a relevant science, as well as salary history to:



INVITRON

INVITRON CORPORATION
Attn: Human Resources Mgr., #R-1
8000 Maryland Ave., Suite 860
Clayton, MO 63105

Pharmacology

As an international leader in the research and development of pharmaceutical products, Squibb has a challenging opportunity available for a Research Associate in our Pharmacology Department.

The primary responsibility of this position is to conduct biochemical experimentation *in vitro* and *in vivo*. Successful candidates will be familiar with preparation of various animal tissues as well as the operation of sophisticated laboratory equipment.

Qualified candidates should have a BS/MS in Biochemistry or equivalent and a minimum of one year related experience. Preference will be given to individuals with experience in research of the arachidonic acid cascade.

Located at our International Headquarters in Princeton, New Jersey, this position offers a stimulating research environment, as well as an excellent salary and comprehensive benefits package.

For confidential consideration, please submit your resume to: **The Squibb Institute for Medical Research, Employment Department 271, P.O. Box 4000, Princeton, NJ 08540.** An equal opportunity employer.



SQUIBB

Where science comes to life.

TOXICOLOGIST

Amoco Corporation has an exceptional opportunity for an individual to assist in coordinating our regulatory compliance efforts. This position involves the preparation of critical analyses of TSCA issues, responding to new rules and amendments, maintaining computerized databases, and providing assistance to corporate needs in the toxicology area. This individual will also be involved in assisting with the computerized toxicity data library, interpreting toxicity data, and the toxicology program. Responsibilities will also involve some trade association activity.

We require a Ph.D. in toxicology, pharmacology, biochemistry or related science. Some industrial or contract laboratory work is desirable. Computer experience a strong plus.

As a recognized industry leader, we provide excellent salaries, comprehensive benefits and outstanding opportunities for career advancement. Please send your resume, with salary requirements, to: **Technical Recruitment Coordinator**.



AMOCO CORPORATION

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Chicago, IL 60601

An Equal Opportunity Employer M/F/H/V

Postdoctoral Scientist

The Department of Pharmaceutical Research and Technologies is seeking a highly motivated Postdoctoral Scientist to conduct research in the area of laser based chromatographic detector development and applications. The position offers the opportunity to work with state-of-the-art technology during the design and construction of novel laser based detectors. Close collaboration with leading academicians and encouragement to publish results in leading journals combine to make this a unique and excellent opportunity for personal and professional growth.

Candidate qualifications include: Ph.D. in analytical or physical chemistry; experience in laser spectroscopy; proven ability to work independently; strong oral and written communication skills; willingness to travel; availability in early 1986.

Postdoctoral positions are normally of two years duration.

SK&F Laboratories is located near Valley Forge, PA in a new, state-of-the-art research facility. We offer an excellent salary, benefits, and relocation package as well as opportunities for personal and professional growth. We encourage & support publication of research results. Please forward your c.v. to George P. Kissell, Jr., Manager, Personnel Relations, SK&F Laboratories, 1590 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.

SK&F

A SmithKline Beckman Company

POSITIONS OPEN

CYTOGENETICIST M.D./Ph.D., pathologists preferred. Specialty certification (or equivalent training) and background in clinical diagnostic and research work important. Experience and a record of scholarship with a strong publication record are required. Demonstrated accomplishment in research. Minimum of 2 years of experience in human cytogenetics necessary. *Women and members of minority groups are encouraged to apply.* Please forward curriculum vitae to: **John E. Craighead, M.D., Department of Pathology, University of Vermont, Burlington, VT 05405.**

DEVELOPMENTAL/REPRODUCTIVE BIOLOGIST DEPARTMENT OF OBSTETRICS- GYNECOLOGY THE UNIVERSITY OF ROCHESTER MEDICAL CENTER

We are seeking a junior faculty member to direct the laboratory portion of the in vitro fertilization program and to develop an independent research program. Special interest sought in preimplantation physiology or the study of preimplantation embryology.

Candidate must have Ph.D. degree in developmental biology, genetics, or reproductive endocrinology/physiology/biochemistry. In addition, it is preferable for applicants to have experience with tissue culture.

Rank and salary are negotiable. Please send curriculum vitae, brief statement of research interests and goals, selected reprints of publications, and three letters of reference to: **CARE Search Committee, Department of Obstetrics-Gynecology, Box 668**

**THE UNIVERSITY OF ROCHESTER
School of Medicine and Dentistry
601 Elmwood Avenue
Rochester, New York 14642**

An Equal Opportunity Employer (M/F)

DIRECTOR OF GERIATRICS: The Department of Internal Medicine of St. Louis University School of Medicine is searching for a director of its Division of Geriatrics. The director will be responsible for the development of clinical, research, education, and training programs for the broad range of health care professionals active in our university medical center complex. The St. Louis Veterans Administration Medical Center hosts a Geriatric Research, Education, and Clinical Center that is an integral component of the university program in geriatrics and gerontology. The director should be an accomplished academician with a distinguished record in research and education and with a commitment to academic excellence. Please send curriculum vitae and three potential references to: **Bernard B. Davis, M.D., St. Louis VA Medical Center (111JC), 915 North Grand Boulevard, St. Louis, MO 63106.** *St. Louis University is an Equal Opportunity Employer.*

ENDOCRINOLOGIST: Applications are invited for a tenure-track position as assistant professor working in areas such as molecular or cellular endocrinology, regulation of growth and development, and neuroendocrinology. The successful applicant will be expected to develop a vigorous research program and to teach at the undergraduate and graduate levels. Requirements are a Ph.D. or equivalent, postdoctoral research in his/her area of interest, and strong prospects for funding of the applicant's research program. Send a detailed curriculum vitae with a summary of research interests and have three letters of recommendation forwarded to: **S. H. Bishop, Department of Zoology, Iowa State University (ISU), Ames, Iowa 50011.** Applicant review begins 21 March 1986. *ISU is an Equal Opportunity Employer.*

ENGINEERING AND PUBLIC POLICY/CARNEGIE-MELLON UNIVERSITY. The Department of Engineering and Public Policy seeks the following new **FACULTY:** a digitally oriented electrical engineer with research interests in telecommunication policy, a mechanical engineer with policy interests related to robotics and manufacturing, a computer scientist with technically focused policy interests, and persons interested in technical issues in international security. Résumé to: **M. Granger Morgan, Head, EPP, Carnegie-Mellon University, Pittsburgh, PA 15213.**

POSITIONS OPEN

DIRECTOR DIVISION OF PLANT AND SOIL SCIENCES West Virginia University Morgantown, West Virginia 26506-6108

Individual will provide administration and leadership of research and teaching programs in agricultural microbiology, agronomy, entomology, genetics, horticulture, plant biochemistry, and plant pathology. A Ph.D. or professional equivalent in an appropriate life science along with an established reputation in teaching, research, and/or extension is required. Administrative experience and proven leadership ability are highly desirable. Position is available 1 July 1986. Application deadline is 31 March 1986, or until a suitable applicant is selected. Send letter of application, a career résumé, and the names of four references to: **Professor Robert L. Jack, Chairman of Search Committee, P.O. Box 6108, West Virginia University, Morgantown, West Virginia 26506-6108; telephone: 304-293-4832.** *West Virginia University is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION DEPARTMENT OF MICROBIOLOGY

Applications are invited for a tenure-track faculty position at the assistant or associate professor level starting July 1986. Candidates must be capable of initiating an independent research program. The research area of interest is open. However, individuals using molecular or immunological approaches to investigate problems related to bacterial and viral pathogenesis are particularly encouraged to apply. Interested individuals should send these curriculum vitae, a letter outlining their teaching experience and research interests, and the names of three references by 1 April 1986 to:

**Dr. Gary R. Pearson, Chairman
Department of Microbiology
Georgetown University Medical Center
3900 Reservoir Road
Washington, DC 20007**

An Equal Opportunity/Affirmative Action Employer

TENURE-TRACK FACULTY POSITION IN CELL BIOLOGY. The Department of Thoracic Surgery of the University of Texas System Cancer Center (UTSCC), M.D. Anderson Hospital and Tumor Institute, seeks applications for a position at the assistant professor level. Applicants must have a relevant Ph.D. or M.D. degree, postdoctoral training, and evidence of ability to establish an independent research program. We are particularly interested in individuals with experience in establishing and characterizing human tumor cells in tissue culture. Experience with chemically defined media and clonogenic assay techniques is also advantageous. Send curriculum vitae, reprints of published works, and letters from three references to:

**Jack A. Roth, M.D.
Thoracic Oncology Section
Building 10, Room 2B07
National Institutes of Health
Bethesda, Maryland 20892**

The UTSCC is an Equal Opportunity/Affirmative Action Employer.

The Division of Medical Genetics at the Harbor/University of California, Los Angeles (UCLA) Medical Center campus of the UCLA School of Medicine is seeking to appoint **TWO NEW FACULTY MEMBERS** for the 1986 to 1987 academic year. The division is an active, interdepartmental group of scientists collaboratively engaged in research in human genetics and training at the medical student, resident, graduate student, and postdoctoral levels. Well-developed clinical programs in general genetics, metabolic disease, prenatal diagnosis, genetic screening, and genetic counseling exist with attendant extensive patient resources. Ample research space, equipment, and institutional support are available. Existing program strengths include clinical genetics, molecular genetics, population genetics, genetic epidemiology, biochemical genetics, cytogenetics, and somatic cell genetics. Applicants should have an M.D. degree. The potential for development of a strong research program is essential. Salary and academic rank will be determined by prior experience but can be at any level. Reply to: **Larry J. Shapiro, M.D., Professor of Pediatrics and Biological Chemistry, Division of Medical Genetics, Harbor/UCLA Medical Center, 1000 West Carson Street, Torrance, CA 90509.**

VETERINARY PATHOLOGIST

The Upjohn Company, a research oriented pharmaceutical company, has a position open in its Pathology and Toxicology Research Unit for a Veterinary Pathologist. The incumbent will design, conduct, and evaluate toxicology studies on human and animal health pharmaceuticals under development. He/She will participate on an interdisciplinary research team such as Animal Health, Digestive Diseases, Central Nervous System Diseases, etc., and will also conduct research in toxicologic pathology and mechanisms of toxicity.

Requirements for the position include:

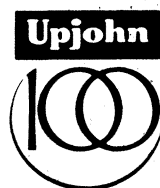
- 1) A DVM or equivalent
- 2) Advanced training in veterinary pathology (Board Certification by American College of Veterinary Pathology preferred)
- 3) Demonstrated research ability (Ph.D. in Veterinary Pathology preferred)
- 4) Excellent oral and written communicative skills.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a mix of excellent cultural, educational and recreational pursuits, including numerous lakes and a four-season climate. Upjohn offers an excellent salary, commensurate with experience and an outstanding benefits program.

For confidential consideration, interested applicants may write, sending curriculum vitae to:

Stephen A. Wright
Employment Representative
The Upjohn Company
5044-41-1
7000 Portage Road
Kalamazoo, MI 49001

If further clarification of the position is needed, please call OUTSIDE of Michigan TOLL FREE 1/800/253-8600 and ask for extension 3-4668, (inside Michigan, call collect (616) 323-4668. Please refer to ad number 18940-F when writing or calling.



A Century of Caring
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An Equal Employment Opportunity Employer M/F

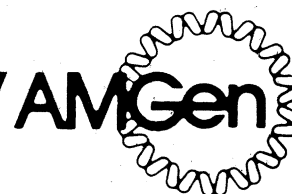
CLINICAL STUDIES MONITOR

An industry leader in advanced biotechnology, **Amgen** develops products for significant applications, including human therapeutics, human diagnostics, animal health care and specialty chemicals. Several of our development programs have progressed to a stage requiring an expansion of our clinical monitoring staff.

This position requires a BA/BS science degree, and 1-2 years experience coordinating and monitoring clinical trials for a pharmaceutical drug or biologicals manufacturer. Excellent communication skills, computer literacy, and ability to travel extensively are required. Strong statistical background, and an ability to perform data entry are highly desirable.

Amgen offers a competitive compensation and benefits package, and is located in an attractive community about an hour northwest of Los Angeles. Qualified candidates should direct a resume to: **Personnel Department.**

AMGEN
1900 Oak Terrace Lane,
Thousand Oaks, CA 91320



An Equal Opportunity Employer

Cellular Neurobiologist



An equal opportunity employer

Pfizer's long-term and expanding commitment to neuroscience research has created a new career opportunity in this area. We are seeking a cellular neurobiologist to join a multi-faceted discovery research team studying a variety of mental diseases and CNS disorders.

A PhD in Neuroscience or a related discipline and at least two years of postdoctoral experience involving the integration of cell biology and neuroscience are required. Sound training and a publication/achievement record which demonstrate a high level of creativity are more important than the specific area of expertise. However, experience with neuronal tissue culture, *in vitro* and *in vivo* models of synaptogenesis and neurite outgrowth, or neuronal growth factors would be advantageous.

A strong motivation to participate in drug-discovery research is expected. While a major contribution towards establishing research directions and goals in the Neuroscience Section can be made, the ability to work as a team member is essential.

This position offers an excellent opportunity for professional recognition and career growth. Superior facilities are available in our new research laboratories, and broad interactions with the external scientific community are actively encouraged. We offer a competitive compensation, benefit and relocation package and the opportunity to live in an attractive Connecticut shore community. Please send resume, including three professional references, and a brief description of your research interests to: Dr. Jerry K. Larson, Manager of Employment, Pfizer Central Research, Groton, CT 06340.

Director, Food Science & Technology

Hershey Foods Corporation, a Fortune 500 company in South Central Pennsylvania, is looking to fill the position of Director, Food Science & Technology who will report to the Vice President of Research & Development.

We are seeking an experienced individual who will have primary responsibility for providing direction and strategic planning for basic/applied research programs for the corporation. Additionally, you will take responsibility for the direction of a staff in areas such as: chemistry and in the functions of food ingredients and their interactions; the biochemistry and technology of food manufacturing processes; as well as sensory evaluation services.

The successful candidate will possess a PhD, preferably in Food Science, Biochemistry or Chemistry; 8-10 years scientific experience in a food research related area, 5 of which must have been in a management capacity.

We offer a salary commensurate with experience, a comprehensive benefits package and relocation assistance as well.

Please send your resume and salary history, in confidence, to S.P. Desjardins, Senior Employee Relations Representative.



Hershey Foods Corporation

14 E. CHOCOLATE AVE., HERSHEY, PA 17033

An Equal Opportunity Employer M/F

committed
to the future

POSITIONS OPEN

DIRECTORSHIP, THE UNIVERSITY OF MICHIGAN BIOLOGICAL STATION (UMBS)

The College of Literature, Science, and the Arts, the University of Michigan, invites application for the directorship of its Biological Station at Pellston, Michigan. The station is a 13,500-acre facility with 145 buildings, including a modern research laboratory, at Douglas Lake in northern lower Michigan. Over its 78-year history, research and summer instruction (currently involving 115 undergraduates and graduates) have been equally emphasized. The successful applicant will assume responsibility for the instructional and research programs of this facility, being in residence there during the summer and on the Ann Arbor campus during the remainder of the year. The appointment, which can begin as early as 1 September 1986, will be a joint one between the Biological Station and the Department of Biology. Applicants must have a doctorate, an outstanding and ongoing research program in a field of biology relevant to the station's activities (for example, aquatic biology, terrestrial or aquatic ecology, biosystematics, animal behavior), a commitment to undergraduate and graduate education, and skills in administration and development. Salary and academic rank are open. Curriculum vitae, statement of current and projected research interests, reprints of five recent publications, and names, addresses, and telephone numbers of three referees should be sent to: **Chairman, UMBS Directorship Search Committee, Museum of Zoology, The University of Michigan, Ann Arbor, MI 48109.** The closing date for applications is 14 March 1986.

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

FACULTY POSITION—MOLECULAR BIOLOGY OR GENETICS OF MICROBIAL PATHOGENESIS

The Department of Medical Microbiology and Immunology is seeking candidates for assistant to associate professor level, with a starting date of the fall of 1986. Individuals with a strong research background in molecular and genetic aspects of microbial pathogenesis should apply. Successful candidates are expected to have a funded research program. The responsibilities of the position include teaching graduate and medical students and developing an active research program. A Ph.D. or M.D. degree, plus postdoctoral experience are required. Salary and level negotiable, depending upon training and experience. Submit curriculum vitae, bibliography, and list of at least three references to:

Blaine L. Beaman, Ph.D., Professor and Chairman
Department of Medical Microbiology
and Immunology
School of Medicine, University of California
Davis, CA 95616

Open until filled, but not after 1 August 1986.

UCD is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITIONS VIRGINIA COMMONWEALTH UNIVERSITY

The Department of Biology of Virginia Commonwealth University anticipates two tenure-track assistant professor positions starting August 1986. Applicants should have a Ph.D. and postdoctoral research experience. Teaching experience is highly desirable. One position is for a microbial geneticist to participate in genetics and cell biology courses. The successful candidate would be expected to develop a course in prokaryote recombinant techniques. The second position is for a parasitologist with competence in cell physiology or immunology who would be expected to develop a course in his or her specialty area. Candidates for each position would be expected to develop an active research program and to direct graduate students. Affiliate appointments and collaborative research at our Medical College of Virginia campus are possible. Applicants should submit curriculum vitae, names and addresses of three references, and a statement of teaching and research interests by 15 March 1986 to: **Dr. Russell V. Brown, Department of Biology, Virginia Commonwealth University, Richmond, VA 23284.**

Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

THE DEPARTMENT OF PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS at Louisiana State University (LSU) Medical Center in New Orleans invites applications for current and anticipated **FACULTY POSITIONS** at LSUMC. Under exceptional circumstances, appointments at more senior levels will be considered. All positions are tenure-track, state-salaried, and include generous start-up funds. Applications are encouraged from, but are not limited to, the following areas of pharmacology: cardiovascular, neuro-, renal, pulmonary, and molecular. Candidates will be evaluated on the basis of research and teaching experience/potential. Successful candidates will be expected to develop and maintain funded research programs and to participate in the teaching of pharmacology throughout the medical center. Starting dates are negotiable. Send curriculum vitae, a brief description of research plans, and the names of three references to: **Dr. Lynn Wecker, Chairperson, Search Committee, Department of Pharmacology and Experimental Therapeutics, LSU Medical Center, 1901 Perdido Street, New Orleans, LA 70112-1393.** *Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION AVAILABLE— PHARMACOLOGY

Applications are invited from individuals with an earned Ph.D. degree and expertise in the area of pharmacology. The successful candidate will participate in teaching at the graduate and undergraduate levels, direct dissertations and theses, and conduct independent and collaborative research. There is some latitude relative to the area of research interest, but preference will be given to individuals with expertise in psychopharmacology and/or neuropharmacology. Salary and rank associated with this 12-month, tenure-track position will be commensurate with experience and qualifications. Interested individuals should submit a letter of application, a complete résumé, and the names of four references to:

William M. Bourn, Head
Division of Pharmacology and Toxicology
School of Pharmacy
Northeast Louisiana University
Monroe, Louisiana 71209-0470

Northeast Louisiana University is an Equal Opportunity Employer. Applications are encouraged from women and members of minority groups.

FACULTY POSITIONS DEPARTMENT OF ANATOMY

The Department of Anatomy of the Milton S. Hershey Medical Center of the Pennsylvania State University has tenure- and non-tenure-track positions available for the current and forthcoming academic years. Background required is a Ph.D. or M.D. in anatomy or related discipline, with research in areas of cell, molecular, or neurobiology. The individuals selected will be expected to teach in gross anatomy/microscopic anatomy and to maintain an active research program. Postdoctoral research training is desirable. Qualified persons need to send curriculum vitae and names of three references to: **Dr. Bryce L. Munger, Professor and Chairman, Department of Anatomy, The Milton S. Hershey Medical Center, P.O. Box 850, Hershey, Pennsylvania, 17033.** Deadline for receipt of applications is 1 May 1986.

Equal Opportunity/Affirmative Action Employer.

THE SAMUEL ROBERTS NOBLE FOUNDATION, INC.

is

seeking an individual who is trained in **MOLECULAR BIOLOGY**, with a minimum of 2 years of experience and is interested in establishing a research group.

- Interactions with established research programs in Immunology, Cell Biology, Biochemistry, and Carcinogenesis.
- Total Funding provided by Foundation in its 40th year of operation.
- Benefits include paid health, dental, and life insurance; retirement plan; thrift plan; bonus; vacation.
- Nonacademic appointment with funding provided for postdoctorals.

Provide a résumé with references and a written research proposal to: **Director, Biomedical Division, Noble Foundation, Box 2180, Ardmore, OK 73402; telephone: 405-223-5810.**

Developmental, Reproductive and Endocrine Biology/ Molecular and Cell Biology/ Neurobiology



Having appointed a new President and Scientific Director, the Worcester Foundation for Experimental Biology is seeking candidates for a substantial number of new junior and senior faculty positions, to be filled over the next two years in the research areas listed above. These positions are institute-backed appointments, with competitive salaries and research support funds. In 1984-85, six such positions were filled, and we now wish to continue building on this momentum.

Our criteria are intellectual creativity and a record of significant work; the quality of a candidate's training is also of importance. We wish to attract scientists whose collegial qualities are in keeping with the Worcester Foundation's tradition as an interactive community of scholars.

Applicants are asked to send a curriculum vitae, names of references and a synopsis of current and planned research; please do not submit reprints or manuscripts.

Send materials to codes DREB, MCB or NB (as appropriate), C/O Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545. We plan to make the first two-three of these appointments by September.

The Worcester Foundation for Experimental Biology is an Affirmative Action/Equal Opportunity Employer.

Post-Doctoral And Research Associate Positions At Molecular Genetics, Inc.

Post-Doctoral Fellows

Available immediately are two Post-Doctoral positions in our molecular biology group.

One of these is to study the immunology and protein biochemistry of viral glycoproteins. Successful candidates will have experience in immunology, protein chemistry, membrane biology, virology, and/or molecular biology, and will combine genetic engineering/recombinant DNA techniques with protein structural studies and immunologic response analyses to investigate the role of viral glycoproteins in infectivity and pathogenesis.

The second position involves the design and use of expression vectors for the production of foreign proteins in mammalian cells. Preference will be given to candidates with previous experience in expression systems utilizing SV40, adenovirus, heat shock or other strong eukaryotic promoters. Work will be directed toward obtaining high level expression of viral glycoproteins for use in the development of subunit vaccines.

Research Associates, Plant Sciences

Available immediately are two staff positions in our plant sciences group for individuals with the following qualifications:

Plant Biochemist. Candidates should have an M.S. in biochemistry or chemistry, or a B.S. with at least two years of relevant lab experience. Requirements for the position include experience with techniques for the separation, quantification, and characterization of large and small molecular weight compounds, as well as experience in conducting enzyme assays. Preference will be given to individuals with HPLC expertise.

Plant Molecular Biologist. Candidates should have an M.S. or B.S. in biology or a related field; preference will be given to those with formal biochemistry training. Demonstrated expertise in a broad range of molecular biology skills appropriate to the isolation and manipulation of plant DNA and RNA is required. Additional background in techniques for obtaining expression of gene products in prokaryotic or eukaryotic cells is desired.

Molecular Genetics, Inc. offers competitive salaries, an excellent benefits package, and a stimulating multidisciplinary research environment.

Interested applicants should send a curriculum vitae, a list of three references, and indicate in the cover letter the position of interest. Applicants will also be considered for other positions for which they qualify. Send to:



**Molecular
Genetics Inc.**

10320 Bren Rd. East
Minnetonka, MN 55343
Att: Mary S. Barton
Manager, Human Resources

ENVIRONMENTAL CHEMIST

The Lawrence Berkeley Laboratory's Applied Science Division is seeking an outstanding chemist to serve as Principal Investigator and to contribute to the leadership of the Building Ventilation and Indoor Air Quality Program. The scientist chosen will have responsibility for research efforts on characterization and chemistry of indoor atmospheric pollutants, including both emissions and reaction products from indoor combustion sources, building materials, and consumer products.

This position requires strong scientific leadership experience and a publications record which clearly demonstrates excellence in independent research. A demonstrated ability to secure funds would be desirable. Substantial instrumental background is also required. Although a Ph.D. in Analytical Chemistry, Physical Organic Chemistry, or Physical Chemistry is preferred, other areas of chemistry are not excluded.

To apply for this position, please send TWO resumes, including salary history, to: **Employment Office, Building 90, Room 1042, Lawrence Berkeley Laboratory, One Cyclotron Road, Berkeley, CA 94720.** Please specify Job #A/2848. LBL is an Affirmative Action/Equal Opportunity Employer, M/F/H.



**LAWRENCE
BERKELEY
LABORATORY**

Faculty Positions

Biomolecular Structure and Function The Pennsylvania State University

Applications are invited for three tenure-track positions at any level as part of an expanded research concentration in the area of biomolecular structure and function. Candidates are being sought in each of the following areas: (i) protein crystal structure determination, (ii) nuclear magnetic resonance studies of proteins, and (iii) macromolecular computer graphics/energy calculations. The university has made a major commitment in this area including laboratory space and equipment necessary for the individual research programs such as high-field NMR, x-ray diffractometer including area detector, and computer graphics system. The positions will be available in either the Department of Chemistry, the Department of Molecular and Cell Biology, or as joint appointments in these departments. Joint affiliation with the newly formed Penn State Biotechnology Institute is also a possibility. Faculty already in the area include Drs. S. J. Benkovic, G. A. Hamilton, W. DeW. Horrocks, Jr., K. A. Johnson, C. R. Matthews, G. A. Rose, D. I. Shalloway, and J. J. Villafranca. Applicants should have the background, motivation, and ability to develop vigorous, productive research programs and to be excellent teachers. Reply to: **Search Committees for Biomolecular Structure and Function, Department of Chemistry, 152 Davey Laboratory, Box P, University Park, PA 16802.** Please indicate the area for which you are applying. Include a detailed vitae, statement of research interests, and up to three recent representative reprints. In addition, the applicant should ask three individuals to send letters of reference directly to us. Review of applications will commence in February 1986. Deadline for receipt of applications is 8 March 1986, or until suitable candidates are identified.

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

TENURE-TRACK FACULTY POSITION IN TOXICOLOGY OR MICROBIOLOGY, University of Arizona, to develop a research program in some area of toxicology or microbiology related to food science and nutrition, and to teach an undergraduate course in food analysis and a graduate course in area of interest. Send résumé, complete list of publications, copy of official transcript if degree was obtained in the last 3 years, and names of three references to: **Darrel E. Goll, Nutrition and Food Science, University of Arizona, Tucson, AZ 85721.** Application Deadline: 30 April 1986, or until position is filled. *An Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.*

FOREST SCIENTIST QUALITY ASSURANCE SPECIALIST

Northrop Services, Inc. is seeking five qualified individuals to assist in the Quality Assurance (QA) Program for research on the effects of atmospheric deposition on forest ecosystems, part of the National Acid Precipitation Assessment Program. Individuals will assist in the preparation of QA protocols, organize and interpret performance evaluations, audit research sites, and prepare QA reports. QA specialists will be located at one of several sites in the eastern U.S. or in Corvallis, Oregon. M.S. degree or equivalent experience in forest science/ecology or related environmental sciences is required. Experience/knowledge of field, greenhouse, and laboratory research is required. Communication skills, general knowledge of QA, and experience with atmospheric deposition research is desirable. Salary commensurate with qualifications. Send résumé and names of three references to:

**Karen L. Borgen
Northrop Services, Inc.
200 S.W. 35th Street
Corvallis, Oregon 97333**

Equal Opportunity/Affirmative Action Employer.

GRADUATE RESEARCH IN BIOLOGY. The Department of Cellular and Structural Biology offers a challenging opportunity for graduate studies in human genetics, molecular and cellular biology, and neurobiology. The Ph.D. program is flexible to encourage interactions among faculty and students and to facilitate the application of interdisciplinary experimental approaches to research projects. Faculty members are active in research in the following areas:

1. Genetic control of human genes
2. Plasma membrane glycoproteins
3. Molecular basis of immunity
4. Extracellular matrix molecules
5. Mechanisms of cell proliferation
6. Reproductive endocrinology
7. Control of pituitary function
8. Control of gene transcription

Qualified candidates (GPA of approximately 3.5 and combined verbal and quantitative GRE scores exceeding 1200) are encouraged to apply as soon as possible (preferably by 15 March 1986) for graduate assistantships with an annual stipend beginning at \$7158. The campus is part of a large health science facility located in northwest San Antonio. This area enjoys a mild climate from September to June with quick access to the beautiful Texas Hill Country. Forms for admission and brochures describing the program and faculty research interests can be obtained from: **Z. Dave Sharp, Ph.D., Applicant Advisor, Department of Cellular and Structural Biology, University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, Texas 78284.**

IMMUNOLOGY POSTDOCTORAL POSITIONS

Projects include: (i) Studies of cellular interactions and tolerance in naturally occurring bone marrow chimeric primates; (ii) In vivo applications of recombinant IL-2 in nonhuman primates. Ph.D., M.D., or D.V.M. Appointment of Department of Medicine, Harvard Medical School. Laboratory immediately west of Boston, with some work also at Dana-Farber Cancer Institute. Send curriculum vitae and references to: **Dr. Norman L. Letvin, Harvard Medical School, New England Regional Primate Research Center, Southborough, MA 01772.**

An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

The University of Michigan Medical School, Department of Anesthesiology, may have, from time to time, several positions available at the **INSTRUCTOR** through **PROFESSOR** level. Board-certified or eligible anesthesiologist qualified to obtain Michigan licensure. Research, clinical, and didactic experience necessary. Reply to: **Box 23, SCIENCE. A non-discriminatory, Affirmative Action/Equal Opportunity Employer.**

UNIVERSITY OF QUEENSLAND LECTURER—PARASITOLOGY

To lecture in the physiology and immunology of parasitism. Should have or expect to gain shortly a Ph.D. degree and experience in teaching. To undertake research, preferably in the area relating to interaction of parasites and host membranes; however, candidates with strong interests in other areas of parasite biochemistry, physiology, and immunoparasitology given serious consideration.

Salary per annum: A\$27,233 to A\$35,777. Appointment for 4 years. Commencement 1 July 1986. Closing date 15 March 1986. Reference 04786.

Additional information and applications forms are available from: **The Staff Officer, University of Queensland, St. Lucia, Queensland, Australia, 4067.**

The University of Queensland is an Equal Opportunity Employer

MEDICAL BIOCHEMISTRY FACULTY POSITION

Applications for a tenure-track position at the assistant or associate professor level in biochemistry of cell biology are sought. Candidates should have postdoctoral experience and will be expected to have or develop an independent research program. Well equipped department with Ph.D. program in new Medical Sciences building. Access to dual laser fluorescence activated cell sorter, gas phase protein sequencer, automated DNA and peptide synthesizer, and SLM-8000 spectrofluorometer. Send curriculum vitae, a description of research plans/interest, and the names of three references to: **Garret M. Ihler, Head, Department of Medical Biochemistry and Medical Genetics, College of Medicine, Texas A&M University, College Station, Texas 77843-1112.** *Equal Opportunity through Affirmative Action.*

MOLECULAR BIOLOGIST/MICROBIOLOGIST. Tenure-track position available September 1986. Assistant professor, Ph.D. preferred, but will consider final stages of dissertation; postdoctoral experience desirable. Must have strong interest in undergraduate teaching which will include molecular biology, microbiology, and introductory biology. Must develop research program using molecular biology techniques. Curriculum vitae with a list of graduate courses taken, a statement of research and teaching interests, and three letters of recommendation must be received by 1 April 1986. Send applications to: **Dr. Albert F. Eble, Trenton State College, Department of Biology, CN 550, Trenton, NJ 08625.** *An Affirmative Action/Equal Opportunity Employer.*

MOLECULAR BIOLOGY-TECHNICAL ADVISOR. Expertise in biomedical research required. Responsibilities: help to develop, implement and teach in Summer Research Institute; supervision and evaluation of student research training; coordination of teaching laboratory function; maintenance of contact with students and research sponsors; coordination of students' research activities. Opportunity for independent research. Academic rank and compensation will depend upon highest degree held and experience. Send résumé to: **Dean of Administration, Long Island University, Brooklyn Campus, Brooklyn, NY 11201.** *Equal Opportunity/Affirmative Action Employer.*

MOLECULAR AND CELL BIOLOGIST: Tenure-track assistant professor of biology. Required: (i) Ph.D., (ii) broad biological background, (iii) desire to join a twelve member department which has a strong commitment to teaching and research programs involving undergraduates. Duties include teaching an upper division course in molecular biology and in team-taught lecture-laboratory courses in introductory biology. Send curriculum vitae, three letters of recommendation, and scholarly materials to: **J. E. Lerum, Chair, Department of Biology, Pacific Lutheran University, Tacoma, WA 98447.** Application deadline 15 March 1986. *An Equal Opportunity Employer.*

Senior Research Scientist

Battelle, Pacific Northwest Laboratories, a contract research laboratory located in Richland, Washington, has an opening for a Senior Research Scientist to work closely with research biological scientists to meet the following goals:

- Design and development of systems and techniques for exposing animals and in vitro preparations to low frequency electric and magnetic fields.
- Design and development of instrumentation and data acquisition techniques in support of biological research.
- Experimental and theoretical research of dosimetry.
- Preparation and publication of scientific papers and reports.
- Development of new research projects via informal and formal contacts with potential research sponsors, development of research ideas, and preproposal and proposal preparation.

Advanced degree in experimental physics, biophysics, electrical engineering, bioengineering, or an allied field is required.

U.S. citizenship required.

Send resume and salary requirements to: **C.J. Mitchell, Professional Employment, Battelle-Northwest, P.O. Box 999, Richland, WA 99352.**

An Equal Opportunity Employer M/F



Battelle

Pacific Northwest Laboratories

Analytical Chemist

Fermentation Development

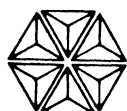
As a leading manufacturer of antibiotics and other pharmaceuticals, Bristol-Myers Company, Industrial Division has opportunity for a high level analytical chemist to join its new Fermentation Development Laboratories in Syracuse, NY.

Selected candidate will manage an analytical group integral to an interdisciplinary scientific team working to improve existing microbial fermentations and to develop new products. This group, under your direction, will apply the most up-to-date analytical and automated technologies to analysis of antibiotics and microbial metabolites in fermentation development projects.

Ideally, you will have a PhD in Analytical Chemistry or a closely related discipline plus formal knowledge of biochemistry and fermentation microbiology. Experience essential in the handling of biological materials, HPLC and GC analysis/instrumentation, computer data reduction, and use of robotics in automation.

We offer an excellent salary and benefits package plus a professional environment conducive to career growth. For prompt, confidential consideration, forward your resume with salary history and requirement, to:

MANAGER OF EMPLOYMENT



**BRISTOL-MYERS COMPANY
INDUSTRIAL DIVISION**

P.O. Box 4755, Syracuse, New York 13221

An equal opportunity employer



Public Service Commission Commission de la Fonction
of Canada publique du Canada

Biologist

**Health and Welfare Canada
Health Protection Branch
Drug Directorate
Bureau of Biologics
Ottawa, Ontario**

We require an experienced biologist to be responsible for the regulatory control testing and evaluation of vaccines for the Poliomyelitis and Mumps Section. You will be expected to plan and direct the testing of these vaccines and to recommend the release of satisfactory products or the recall of those found unsatisfactory. All programs on investigation of new test procedures for viral products will be your responsibility. You will direct a program of research on the genetic characterization of the polio virus and other viruses. We will rely on you to review and evaluate new drug submissions and to participate in identifying the regulatory requirements for new viral products. You will provide scientific and regulatory advice to your staff, manufacturers and government agencies, and participate in conferences and workshops.

You require graduation from a recognized university at the doctorate level or with a lesser degree with evidence of research experience in microbiology or biology. It is essential that you possess extensive experience in virology with biological, biophysical and biochemical characterization of viruses. You should also possess experience in theoretical and practical aspects of viral products. Knowledge of English is essential.

We offer a salary ranging from \$44,494 to \$51,382 commensurate with your qualifications and experience.

Forward your résumé and/or application form, quoting reference number S-85-31-6200-47JG-(G35), to:
Joan Girling (613) 996-8054
Public Service Commission of Canada
Ottawa, Ontario K1A 0M7

Closing Date: March 31, 1986

Vous pouvez obtenir ces renseignements en français en communiquant avec la personne susmentionnée.

Personal information you provide is protected under the Privacy Act. It will be held in personal information bank PSC/PU-040 Personnel Section Files.

The Public Service of Canada is
an equal opportunity employer

Canada

POSITIONS OPEN

MOLECULAR VIROLOGIST YALE UNIVERSITY SCHOOL OF MEDICINE

The Department of Epidemiology and Public Health invites applications for a position at the assistant professor level in the Yale Arbovirus Research Unit, available 1 July 1986. Candidates should have postdoctoral research experience in molecular virology, potential to obtain research support, and an interest in the molecular epidemiology and evolution of arboviruses. The appointee will be expected to interact with other members of the unit, to assist in arbovirus reference center activities, to develop an independent research program, and to participate in teaching of graduate students. Send curriculum vitae, a summary of research interests, and names of three references by 30 March 1986 to: **Dr. Robert B. Tesh, Department of Epidemiology and Public Health, Yale University School of Medicine, P.O. Box 3333, New Haven, Connecticut 06510.**

Yale University is an Equal Opportunity/Affirmative Action Employer

NEUROBIOLOGY

A tenure-track position is available at the assistant or associate professor level in the Department of Anatomy and Cell Biology at the University of Virginia. Primary teaching responsibilities are in neuroanatomy in a medical neuroscience course, and candidates should have training in this activity. Research areas may include cellular and developmental neurobiology, neuroendocrinology, and neuroanatomy. The department stresses research, and candidates are expected to maintain an independent program of investigation. Candidates should have postdoctoral experience. The department provides opportunities for interactions with researchers in reproductive, cellular, and developmental biology. In addition, the position will include a joint appointment with the Department of Neuroscience, providing associations with colleagues in other branches of neuroscience. Interested persons should send their curriculum vitae and the names of three references to: **Dr. Charles J. Flickinger, Chairman, Department of Anatomy and Cell Biology, Box 439, University of Virginia Medical Center, Charlottesville, Virginia 22908.** *An Equal Opportunity/Affirmative Action Employer.*

University of California, Los Angeles Mental Retardation Research Center Neuropsychology and Neuroanatomy Group. There will be a vacancy in the Mental Retardation Research Center for a **NEUROPHYSIOLOGIST** and/or **NEUROANATOMIST**. The individual selected should have a first rate research record, strong current extramural competitive grant funding, and the ability to interact with scientific colleagues at a senior level. We are looking for a scientist whose main interests are in development of the mammalian central nervous system. Laboratory space, setup funds, and excellent university salary and benefits are available. The successful candidate must assume the position by 1 July 1987. Write with names of three references to:

Dr. N. Buchwald
Mental Retardation Research Center
Neuropsychiatric Institute, UCLA
760 Westwood Plaza, Los Angeles, CA 90024
UCLA is an Equal Opportunity/Affirmative Action Employer.

PHARMACOKINETICS/RISK ASSESSMENT. Applications are invited from persons with training in pharmacokinetics to conduct quantitative nonlaboratory research aimed at incorporation of pharmacokinetic data into health risk assessment. Position will also involve consulting on specific risk assessment projects. Applications from persons on sabbaticals are encouraged, although preference will be given to applicants seeking permanent employment. Send application, curriculum vitae, and have three letters of recommendation forwarded to: **Dr. Kenny S. Crump, K. S. CRUMP and Company, Inc., 1201 Gaines, Ruston, LA 71270.**

PHYSICAL OCEANOGRAPHER, POSTDOCTORAL RESEARCH SCIENTIST.

Coastal Science and Engineering, Inc. has an immediate opening for a 1-year appointment (with opportunity for long-term employment) to complete MMS model verification study of currents and sediment transport. Applicant must have skills in nearshore/surf-zone dynamics, data processing, and fieldwork. Includes extensive fieldwork in Alaska. Salary mid 20's. Contact: **Dr. Tim Kana, P.O. Box 8056, Columbia, SC 29202.**

POSITIONS OPEN

NEUROLOGIST/CLINICAL NEUROPHYSIOLOGIST/EPILEPTOLOGIST—Direct EEG Department and Comprehensive Epilepsy Program. Major interest in research and the surgical treatment of epilepsy. Board-certified in neurology and electroencephalography (ABQEEG). Previous experience essential, including EEG and video monitoring and electrocorticography. Send curriculum vitae and a simple statement of interest to: **Dr. Robert S. Dow, Good Samaritan Hospital and Medical Center, 1040 NW 22nd Avenue, Portland, Oregon 97210.** *Good Samaritan Hospital and Medical Center is an Equal Opportunity/Affirmative Action Employer.*

PHARMACOLOGIST. Applications are invited for a new tenure-track faculty position in the Department of Pharmacology, University of South Carolina School of Medicine. Ph.D. and/or M.D. degree and postdoctoral experience required. The successful candidate will be expected to develop an independent research program which merits extramural support and to teach medical/graduate students. Preference will be given to individuals whose research interests are compatible with current faculty, for example, metabolic control mechanisms and molecular mechanisms of drug action. Individuals should submit curriculum vitae, statement of professional goals, and the names of three references to: **Dr. D. O. Allen, Chairman, Department of Pharmacology, University of South Carolina School of Medicine, Columbia, SC 29208.** Formal consideration of applications will begin 14 February 1986. *The University of South Carolina is an Equal Opportunity/Affirmative Action Employer.*

PHYSICAL OCEANOGRAPHER. The Graduate School of Oceanography at The University of Rhode Island invites applications for a research faculty position in physical oceanography. We are primarily interested in candidates with theoretical and/or numerical modeling experience at the assistant professor level, but the level of the appointment will depend on the qualifications of the applicant. Applicants must have a Ph.D. degree and have shown excellence and independence in their research. Some start-up funds are available, but within a reasonable period of time the candidate is expected to develop their own program of funded research. Our department is actively involved in studies of western boundary currents, stability properties of frontal systems, eddy transport processes in energetic and quiet ocean regions, equatorial oceans, and ocean-atmosphere exchange processes. Please send application including curriculum vitae, a statement of research interests, and names of three references by 21 March 1986 to: **Professor Thomas Rossby, Physical Oceanographer (090325) Position, THE UNIVERSITY OF RHODE ISLAND, P.O. Box 357, Kingston, RI 02881-0357.** *An Affirmative Action/Equal Opportunity Employer, M/F.*

PHYSIOLOGICAL PSYCHOLOGIST. The University of Wisconsin, Department of Psychiatry, is seeking to fill a project associate opening. This position is full time, with an initial appointment through June 1987, renewable annually. The applicant should have a doctorate in physiological psychology or a related area and 2 years of postdoctoral experience. The appointee will be expected to help sustain an ongoing research program in the area of controllability of stress and the relationship to endocrine, autonomic, and behavioral systems in rats. Candidates should send curriculum vitae by 1 March 1986 to: **Ned Kalin, M.D., Wm. S. Middleton Veterans Hospital, 2500 Overlook Terrace, Madison, WI 53705.**

**THE HEBREW UNIVERSITY OF JERUSALEM
THE ALEXANDER SILVERMAN INSTITUTE
OF LIFE SCIENCES** is seeking candidates for the following tenure-track positions:

1. **PLANT PHYSIOLOGIST/PLANT-MOLECULAR-BIOLOGIST**, assistant/associate professor in the Department of Botany
2. **ANIMAL BEHAVIORIST/BEHAVIORAL ECOLOGIST/ANIMAL ECOLOGIST**

Rank/salary according to qualifications. Send curriculum vitae, list of publications, representative papers, and have three letters of reference sent to: **Professor H. Eyal-Giladi, Chairman, The Institute of Life Sciences, The Hebrew University of Jerusalem, 91904 Israel, before 1 April 1986.**

POSITIONS OPEN

POSTDOCTORAL ASSOCIATE. Department of Surgery, Section of Urology. To investigate the biochemical and physiological mechanisms involved in the regulation of autonomic receptors and calcium antagonist binding sites in the smooth muscle of the urinary tract in mammalian tissues. Requires Ph.D. or equivalent in pharmacology or biochemistry, as well as a minimum of 2 years of postdoctoral training in radioligand receptor binding techniques, cyclic nucleotide enzymatic assays, and smooth muscle physiology. Full-time position with annual salary of \$25,000. Interested applicants should submit their résumés to: **Dr. Robert Weiss, Yale University School of Medicine, Department of Surgery, Section of Urology, 33 FMB, 310 Cedar Street, New Haven, Connecticut 06510.** *Yale University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL-BIOPHYSICAL-BIOINORGANIC Ph.D. with biochemical or biophysical training and interest in metal ion-protein interactions. Application of new laser spectroscopic methods and lanthanide ion luminescence to probe calcium-binding proteins and nucleic acids [See *Acts. Chem. Res.* 384, 14(1981); *Biochemistry* 24, 6639(1985)]. Send curriculum vitae and letters of recommendation to **Professor William DeW. Horrocks, Jr., 152 Davey Laboratory, Department of Chemistry, The Pennsylvania State University, University Park, PA 16802.**

Affirmative Action/Equal Opportunity Employer.

THE AUSTRALIAN NATIONAL UNIVERSITY invites applications from suitably qualified women and men for appointment as **POSTDOCTORAL FELLOW, MEDICAL MOLECULAR BIOLOGY UNIT, JOHN CURTIN SCHOOL OF MEDICAL RESEARCH.** The Medical Molecular Biology Unit is seeking a Ph.D. graduate to participate in a research program concerning the molecular biology of interleukin-3 and other haemopoietic growth factors. The current research of the unit is using recombinant DNA and gene transfer methods to help understand the molecular basis of cell growth and differentiation and to study the genetic changes leading to proliferative blood disorders, such as leukaemia. There is a continuing emphasis on gene structure, expression, and regulation. Applicants should have a Ph.D. degree. Experience in recombinant DNA techniques is essential. Appointment will be for 2 years. Inquiries to: **Dr. I. G. Young, Medical Molecular Biology Unit.** Closing date: 14 February 1986. Reference: JC: 19.12.1. **CONDITIONS OF APPOINTMENT.** Salary will be in accordance with qualifications and experience within the range: Postdoctoral fellow grade 1 (at a fixed point) \$23,473 to \$26,889 per annum. Grants towards travel, assistance with housing, superannuation. Maternity leave is available. The University reserves the right not to make an appointment or to make an appointment by invitation at any time. Applicants should quote the reference number when submitting applications to: **R. V. Dubs Registrar, GPO Box 4, Canberra, ACT, 2601, Australia.** *The University is an Equal Opportunity Employer.*

POSTDOCTORAL POSITION IN GENETIC EPIDEMIOLOGY. We are looking for an individual with a strong background in human population genetics, quantitative genetics, or epidemiology and interest in genetic mediation of disease susceptibility, to collaborate with investigators in our Population Genetics Laboratory (Drs. Jean W. MacCluer, Candace M. Kammerer, and Bennett Dyke). Ongoing projects include linkage studies of single gene defects in man; an investigation of genetic factors contributing to susceptibility to atherosclerosis in pedigreed baboons; and evaluations of methods of genetic analysis using computer-simulated data. Experience with complex segregation analysis and linkage analysis desirable. Please send résumé and names of three references by 7 March 1986 to: **Personnel Director, Southwest, Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284.** *Equal Opportunity Employer, M/F.*

POSTDOCTORAL POSITION available immediately to study the transcriptional regulation of human liver genes during the acute phase response. Background in nucleic acid biochemistry, especially transcriptional analysis, would be helpful. Send curriculum vitae and names and addresses of three references to: **Dr. David Perlmutter, Division of Cell Biology, Children's Hospital, 300 Longwood Avenue, Boston, MA 02115.**

Biotechnology

Diagnostics/Vaccines

Cambridge BioScience Corporation, a biotechnology company specializing in infectious disease diagnostics and r-DNA vaccines, offers exciting positions in its Hopkinton, MA laboratories. We are seeking advanced level scientists, research associates and production technicians. A number of new diagnostic products will be introduced in 1986.

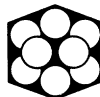
Director, Product Development— Immunodiagnosics

- Ph.D. or M.S. level with a strong track record in bringing products from feasibility through production.
- Working knowledge of quality assurance, regulatory and production functions.
- Capability to perform at the bench in a problem solving mode.
- Strong scientific background in one or more of the following areas: virology, immunology and immunochemistry.

Production Technicians/ Research Associates

- Experience with production and development of diagnostic products, including GMP procedures.
- Experience in process engineering and maintenance of manufacturing equipment.

Cambridge BioScience offers a unique and stimulating environment and close working associations with leading academic institutions. Qualified applicants should send resume and salary requirements to: **Cambridge BioScience, Personnel Department, 35 South Street, Hopkinton, MA 01748.**



**Cambridge
BioScience**

Associate Senior Investigator Cell Biology

The Cell Biology Department of Smith Kline & French Laboratories, located in suburban Philadelphia, Pennsylvania, is seeking an outstanding individual to join its Mammalian Cell Culture Section to design and develop novel immuno and enzyme assay systems for the detection of a variety of protein molecules.

The successful candidate will also:

- develop research strategies for protein assay development and optimization of large scale mammalian cell culture.
- supervise technical staff involved in these endeavors.
- perform immunoassays using ELISA and other microtiter methodologies.
- culture mammalian cells in traditional small scale as well as large scale systems.
- determine specific protein content using absorbance and chromogenic methodologies.
- purify gamma globulins from serum and label them with fluorescent probes.

Candidates are required to have:

- a Ph.D. in Biochemistry, Biology, Cell Biology or related field with 2 or more years of postdoctoral experience plus 2 or more years of industrial experience.
- experience supervising B.S. level technical staff.
- experience performing colorimetric enzyme assays, analyzing raw data and calculating enzyme activity from standard curves, keeping detailed records and organizing and presenting data, with ELISA and RIA based immunoassays, culturing mammalian cells.
- the ability to work with sophisticated electronic equipment.
- the willingness to work with radioactive material.

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your C.V. and names of three references to Walter B. Flagg, Senior Employment Consultant 1562 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer.

SK&F

A SmithKline Beckman Company

ASSOCIATE DIRECTOR INSTITUTE FOR INFORMATION TECHNOLOGY GEORGE MASON UNIVERSITY (GMU)

The Institute for Information Technology of George Mason University invites applicants for the new position of associate director. George Mason University is located in Northern Virginia in the heart of the burgeoning information industry surrounding the nation's capital, enrolls 17,000 students with 700 faculty, and offers doctoral programs in seven areas of study including Information Technology, an area of emphasis at the university.

Candidates should have a doctorate in one of the fields broadly related to information technology, together with a record of achievement in research, in industry or academe. It is expected that the successful candidate will satisfy the GMU requirements for a faculty appointment in the appropriate academic department. Other qualifications include in-depth experience in university research administration and an understanding of university and industry practices related to their conduct of research and the ability to work with research sponsors.

The primary responsibilities will be to assist in building research in the Institute for Information Technology, serving as liaison between faculty and industry and between university departments, schools, and offices. It is envisioned that research centers will be started in specific areas as a result of assistance provided by the associate director and that this person will help these become strong research centers. Additional requirements include sharing general administrative duties with the director, part-time teaching, and research as appropriate.

Salary and benefits are competitive and commensurate with experience and qualifications. Nominations and applications along with curriculum vitae and/or résumé and names of three references will be considered in confidence and should be sent no later than 15 March 1986. The date of appointment is negotiable. Correspondence should be addressed to:

**Associate Director Search Committee
School of Information Technology and Engineering
George Mason University
4400 University Drive
Fairfax, Virginia 22030**

An Affirmative Action/Equal Opportunity Employer

CLINICAL PHARMACOLOGIST

Warner-Lambert/Parke-Davis

The Warner-Lambert/Parke-Davis Pharmaceutical Research Division is seeking an M.D. to join our growing Clinical Pharmacology Department. This opportunity is located in Ann Arbor, MI, adjacent to the University of Michigan.

This physician will be responsible for the conduct of all clinical trials involving healthy volunteers at our clinical research facility in Ann Arbor; will also be responsible for the design, implementation, and interpretation of clinical trials of new drugs in Phase I and early Phase II; and, pharmacokinetic, bioavailability and bioequivalence studies.

The successful candidate will be an M.D. with eligibility for medical licensure in Michigan; specialty training in Internal Medicine (board certification preferred) and Clinical Pharmacology; and academic or industrial experience in clinical research. Additional highly desirable qualifications include a Ph.D. degree, medical subspecialty training, and expertise in clinical pharmacokinetics.

Join the dynamic Warner-Lambert/Parke-Davis research team and enjoy competitive compensation, benefits and professional development in an outstanding living environment. Qualified applicants should send a resume, and salary requirements in confidence to:

**Ms. Maggie Wolin
Sr. Human Resources Representative**

WARNER-LAMBERT/PARKE-DAVIS

2800 Plymouth Road • Ann Arbor, MI 48105

An Equal Opportunity Employer M/F/H

POSITIONS OPEN

POSTDOCTORAL FELLOWS—MOUNT SINAI SCHOOL OF MEDICINE. Two positions available immediately to participate in a multidisciplinary research project examining hepatic ethanol metabolism. One position entails studies of cytochrome P-450—promoted oxidation of ethanol and other xenobiotics. Prior experience in the enzymology of oxidative drug metabolism is desirable. The other position involves investigating the respective roles of the various enzymatic pathways in total ethanol metabolism by the liver. Background should include familiarity with radioisotopes and hepatic intermediary metabolism. Salary is commensurate with experience, minimum of \$18,000 per year, renewable. Telephone inquiries to: **Drs. Jerome M. Lasker or Jeffrey A. Alderman; telephone: 212-584-9000, extension 1149 or 2064,** or send curriculum vitae and the names of at least two references to: **Dr. Charles S. Lieber, Director, Alcohol Research and Treatment Center, Bronx Veterans Administration Medical Center, 130 West Kingsbridge Road, Bronx, NY 10468.** *An Equal Opportunity Employer.*

POSTDOCTORAL FELLOW. Position available in the **IMMUNOLOGY RESEARCH LABORATORY.** Research emphasis on the differentiation antigen of chondrocytes and potential role in autoimmune disease. Must be proficient in tissue culture assays of cell mediated immunity, as well as working knowledge of antibody assays, including use of monoclonals. Send curriculum vitae and references to: **Eugene M. Lance, M.D., Ph.D., Shriners Hospitals for Crippled Children, 1310 Punahou Street, Honolulu, HI 96826.** *Shriners Hospitals is an Equal Opportunity Employer*

POSTDOCTORAL POSITION—HUMAN MOLECULAR GENETICS, available immediately to clone and characterize human DNA repair genes. Potential to develop independent research program after 2 to 3 years. Please submit curriculum vitae, selected reprints, and names of three references to: **Steve S. Sommer, M.D., Ph.D., Department of Biochemistry and Molecular Biology, Mayo Clinic/Mayo Foundation School of Medicine, Rochester, MN 55905.** *An Equal Opportunity/Affirmative Action Institution.*

POSTDOCTORAL POSITIONS IN APPLIED ECOLOGY

Four or more fully funded postdoctoral positions in applied ecology in the Zoology Department at Miami University are anticipated. Applications are invited from persons interested in conducting research in one or more of the following areas: aquatic ecology, aquatic toxicology, behavioral toxicology—ecology, and agroecosystem ecology. Appointments may begin anytime after 1 May 1986 and will be for either 1 or 2 years. Each appointment carries an annual salary of \$19,000 and a full range of fringe benefits. Each postdoctoral will participate in one or more ongoing research projects in collaboration with the permanent faculty. A listing of projects and the faculty involved is available upon request. Interested persons should submit a résumé, three letters of recommendation, and transcripts of all academic work to: **R.G. Sherman, Chair of Zoology, Miami University, Oxford, OH 45056.** Applications will be accepted until the positions are filled.

POSTDOCTORAL POSITION IN SMOOTH MUSCLE BIOLOGY. Position available immediately to study the interaction of lipids and cyclic nucleotides in the regulation of calcium metabolism in smooth muscle cells cultured from vascular and reproductive organs. A background in biochemistry or cell biology are required and experience in smooth muscle cell culture methods and a Ph.D. or equivalent degree is preferred. Salary to be commensurate with experience. Send curriculum vitae, names of three references to: **Dr. J. Frederick Krall, University of California, Los Angeles-SFVP Department of Medicine (111K), VA Medical Center, 16111 Plummer Street, Sepulveda CA 91343.**

POSTDOCTORAL POSITION available immediately at Baylor College of Medicine for Ph.D. with background in cellular/molecular immunology. General area of research will be systemic and pulmonary immunoregulation with emphasis on sarcoidosis and solid organ transplantation. Experience in clinical laboratory also helpful. Position is for a minimum of 1 year; salary will be competitive. Send curriculum vitae and three letters of reference to: **Dr. E. Clinton Lawrence, 6535 Fannin, F-907, Houston, TX 77030.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS available immediately to study the molecular genetics of early mammalian development. Specific research areas include the use of teratocarcinoma stem cells, and homeobox genes to study mouse embryogenesis and gametogenesis. Experience in molecular biology, cell biology, or somatic cell genetics is required. Interested individuals should send curriculum vitae and reference to: **Dr. Chi Nguyen-Huu, Departments of Microbiology and Urology, Columbia University College of Physicians and Surgeons, 630 West 168 Street, New York, NY 10032.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION HARVARD MEDICAL SCHOOL

Available 1 July 1986. Organic chemistry will synthesize radionuclide carrier molecules as part of a multidisciplinary program studying the toxic effects of internal emitters in cancer radiotherapy. Salary contingent on experience (NRSA Guidelines). U.S. citizenship or permanent residency status required. Please Contact: **Dr. A. I. Kassis, Harvard Medical School, SWRL, 50 Binney Street, Boston, MA 02115.** Telephone: 617-732-2184. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available to study the molecular mechanisms involved in receptor-mediated endocytosis. Current work in the laboratory is focused on understanding the structure, distribution, and regulation of the proton pumps responsible for acidification of endocytic and other intracellular compartments. Experience in membrane protein chemistry and/or immunological techniques is desirable. Send curriculum vitae, reprints, and three letters of reference to: **Dr. Michael Forgac, Department of Physiology, Tufts University School of Medicine, 136 Harrison Avenue, Boston, MA 02111.**

POSTDOCTORAL POSITION available immediately for investigations of eicosanoid and gonadotropin receptor structure and function, using novel photoactivable ligands, and laser-induced photolysis. Opportunities also available for studies of eicosanoid mechanism of action and secretion by reproductive tissues. Position funded by Department of Defense, salary equivalent to NIH fellowships. Please send curriculum vitae to: **Tony A. Fitz, Ph.D., c/o Civilian Personnel, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814.**

POSTDOCTORAL POSITION available immediately to join a group that is cloning and characterizing four genes involved in induction of cytochrome P₁-450. Recombinant DNA experience is essential. Salary \$20,904 to \$26,052. Send curriculum vitae and names of three references to: **Laboratory Personnel Officer (OH), University of California, Los Angeles, Laboratory of Biomedical and Environmental Sciences, 900 Veteran Avenue, Los Angeles, CA 90024.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available immediately for person with background in immunochemistry to study pancreatic islet antigens relevant to human diabetes. Salary: \$20,000. Send curriculum vitae and three letters of recommendation to: **M. Arthur Charles, M.D., Ph.D., Department of Medicine, University of California, Irvine, CA 92717.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION—Metabolism and toxicity of gold-based antiarthritic drugs. Project involves separation and characterization of gold-containing metabolites from patient fluids using HPLC/plasma mass spec, further characterization via FAB MS, NMR. Other aspects: syntheses of known metabolites and toxicity testing via tissue culture and animal models. Send curriculum vitae and three reference letters to: **Professor R. C. Elder, Department of Chemistry, University of Cincinnati, Cincinnati, Ohio 45221-0172.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available for research in gene structure and function of invertebrate respiratory proteins: hemoglobins and hemocyanins. Individual sought with prior experience with recombinant DNA techniques. Please send curriculum vitae and three references to: **Dr. Austin Riggs, Department of Zoology, University of Texas, Austin, Texas 78712.** Telephone: 512-471-1585.

POSITIONS OPEN

POSTDOCTORAL POSITION AS RESEARCH ASSOCIATE at Harvard Medical School available in the Mailman Research Center of McLean Hospital. Research is multidisciplinary and deals with the cell and molecular biology of the cytoskeleton in neuropsychiatric disorders and aging. Interest or experience in one or more of the following areas is desirable: Immunocytochemistry and related immunochemical techniques or neuroanatomical mapping techniques.

Minimum requirement: Recent or pending Ph.D. with background in immunology, biochemistry, or neuroanatomy. Address curriculum vitae and letters of reference to:

**Ralph A. Nixon, M.D., Ph.D.
Ralph Lowell Laboratories
McLean Hospital
Belmont, MA 02178**

McLean Hospital is an Equal Opportunity Employer

POSTDOCTORAL RESEARCH ASSOCIATE POSITION IN CELLULAR NEUROBIOLOGY available for in vitro/in vivo studies of seizure-related enzymes in astroglia and cellular mechanisms of lead toxicity. Experienced with enzyme kinetics, neurotransmitter metabolism, electrolyte metabolism, or cell culture preferred. Salary: \$16,000 to \$20,000, commensurate with experience. Send curriculum vitae and names of three references to: **Dr. Evelyn Tiffany-Castiglioni, Department of Veterinary Anatomy, Texas A&M University, College Station, Texas 77843.**

POSTDOCTORAL RESEARCH POSITION (with potential for further advancement) available immediately for NIH-funded training program in the fields of connective tissue (collagen, elastin, glycosaminoglycans) and photobiology. Starting level commensurate with experience. Send curriculum vitae and names of three references to: **Dr. Raul Fleischmajer, Department of Dermatology, THE MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, NY 10029.** *An Equal Opportunity Employer.*

UNIVERSITY OF MARYLAND AT BALTIMORE SCHOOL OF MEDICINE

POSTDOCTORAL RESEARCH POSITION in human cytogenetics in the Division of Human Genetics to join a multidisciplinary investigation of chromosomal and cell cycle effects of phenytoin and related compounds. This position is NIH-funded and immediately available for a 2- to 3-year period. Applicants should have a Ph.D. in genetics, with experience in cell culture. The training program of the division is American Board of Medical Genetics eligible with six full-time Board-certified faculty members working in various areas of human genetics. Send curriculum vitae and three letters of recommendation to:

**Maimon M. Cohen, Ph.D.
Division of Human Genetics
655 West Baltimore Street
Baltimore, Maryland 21201**

RESEARCH ASSOCIATE with Ph.D. in biochemistry or entomology for research project involving insect physiology and insect biochemistry. Scientist needed who has a solid background in protein chemistry, protein purifications, and insect physiology, who is able to determine physicochemical properties and analyze and interpret data from such determinations, and who is able to test the isolated protein. Two years of experience and excellent references required. Preference given to applicant who has previously shown creativity in designing experiments and developing new techniques. Forty-hour week at \$17,000 per year. Successful applicant may supervise up to three persons and will be supervised by the project director. Qualified applicants send résumé or application letter to: **Arizona DES Job Service Attention 732-A Re: 0801904 P.O. Box 6123, Phoenix, AZ 85005.** (Job location: Tucson; employer-paid ad; proof of authorization to work in U.S. required; list in résumé or application letter.)

Immediate opening. **RESEARCH ASSOCIATE—Ph.D.** with experience in protein purification, HPLC, immunochemical methods, monoclonal antibody, and so forth. Salary \$25,000 to \$30,000. Send résumé to: **Adel A. Yunis, M.D., Department of Medicine (R-38), University of Miami School of Medicine, P.O. Box 016960, Miami, FL 33101.**

An Equal Opportunity Employment

Cell Biology Research

The Pharmaceutical Research and Development Division of **The Upjohn Company**, located in Kalamazoo, Michigan has openings in its Cell Biology/Biotechnology Unit for qualified B.S. or M.S. research associates in the areas of membrane biochemistry, cell biology, immunology and analytical chemistry. Qualified candidates should have expertise in protein purification, chromatography, electrophoresis, HPLC, tissue culture, and enzyme assays.

Upjohn offers a stimulating research environment, opportunity for career growth, competitive salary and benefits, and relocation assistance. Kalamazoo, a mid-sized Michigan community provides a rich mix of cultural, educational, and recreational pursuits. In addition, the positions described above present an extraordinary opportunity to actively participate in state-of-the-art research programs.

For confidential consideration, please call from outside of Michigan toll free 1-800-253-8600, ext. 3-6767, (inside Michigan call collect 616-323-6767), to request an employment application be sent to you immediately. Please refer to ad number 1842-A when calling.

An Equal Employment Opportunity Employer M/F



A Century
of Caring
1886-1986

IGEN, Inc. has made a major new commitment to Biomolecular Chemistry and Immuno-analytic systems. A multidisciplinary team is being assembled to exploit these areas.

We are looking for exceptional individuals with B.S., M.S., or PH.D. degrees in the following areas:

ORGANIC SYNTHESIS	IMMUNOCHEMISTRY
BIO-INORGANIC CHEMISTRY	ELECTROCHEMISTRY
BIOCHEMISTRY	POLYMER CHEMISTRY
PROTEIN CHEMISTRY	IMMUNOASSAY
MEMBRANE CHEMISTRY	DEVELOPMENT

IGEN, Inc., a dynamic, growing company and a leader in the field of Biotechnology is located in the Washington, D.C. area. We provide excellent salaries and full benefits, as well as equity participation. These positions offer an excellent opportunity for professional recognition and career growth. For consideration, send your resume and a cover letter stating your qualifications with a salary history in confidence to the Personnel Director.

IGEN, Inc.

1530 East Jefferson Street
Rockville, Maryland 20852

Sr. Research Associate Synthetic Protein Chemistry

Located in the San Francisco Bay Area, Becton Dickinson is a nationally recognized leader in biotechnology. Currently, we have an opportunity for a Senior Research Associate to develop a facility for producing synthetic peptides to be used as potential immunogens. This will include the operation and maintenance of ABI peptide synthesis instrumentation and HPLC equipment for the production and analysis of these synthetic molecules.

The position requires a MS degree in Biology, Biochemistry or Molecular Biology or a BS with at least two years laboratory experience in peptide/protein chemistry. Basic computer skills are also preferred although not required. Thorough knowledge of protein chemistry and protein purification techniques, protein labeling techniques, antibody immunoassay techniques, chromatography experience is necessary. Direct experience in the preparation of synthetic peptides for hybridoma production would be helpful but not essential.

Becton Dickinson offers competitive salaries and an excellent benefits package. Send resume, including salary history, to: Manager, Employment, Becton Dickinson, 2375 Garcia Avenue, Mountain View, CA 94043. An Equal Opportunity Employer.

Caring for people is our business

**BECTON
DICKINSON**

Cell Biologist Research Biologist

The Pathology and Toxicology Research Unit of **The Upjohn Company**, located in Kalamazoo, Michigan is seeking a motivated research associate for the Electron Microscopy Laboratory.

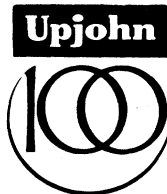
Responsibilities will include: the isolation and maintenance of primary mammalian cell cultures, participation in design and execution of experimental procedures in *in vitro* toxicology, analyze changes in cellular morphology and biochemistry in response to injury and in summarization and preparation of scientific reports.

Qualified applicants will have a B.S. and several years experience and/or an M.S. in Cell Biology, Biochemistry or related field. Thorough working knowledge of tissue culture techniques and experience with "wet lab" techniques, such as enzyme analysis and chromatography, are necessary. Knowledge and experience of cellular toxicology, mechanism of cell injury, immunocytochemistry and electron microscopy are highly desirable.

Upjohn offers a competitive salary, commensurate with experience and a comprehensive benefits program.

For confidential consideration, please call from outside of Michigan toll free 1-800-253-8600, ext. 3-6767, (inside Michigan call collect 616-323-6767) to request an employment application be sent to you immediately. Please refer to ad number 18927-A when calling.

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POSITIONS OPEN

POSTDOCTORAL RESEARCH POSITION available to study cardiac metabolism/biochemistry, with emphasis on how these systems are altered in heart failure and related disease states. Ph.D. degree required, preferably in biochemistry with practical knowledge of metabolic, biophysical, and mechanical aspects of muscle function. Replies should be addressed to:

Peter K. S. Siegl, Ph.D.
Cardiovascular Pharmacology
Merck Sharp & Dohme
Research Laboratories
West Point, PA 19486
Equal Opportunity/Affirmative Action, Veterans, Handicapped

PROFESSOR AND HEAD DEPARTMENT OF WILDLIFE AND FISHERIES SCIENCES TEXAS A&M UNIVERSITY

Texas A&M University seeks an accomplished scientist-educator to head this diverse department of about 40 faculty and professional staff, 160 graduate students, and 230 undergraduate majors. The department's programs focus on ecology and management of wildlife and fisheries resources, aquaculture, vertebrate genetics and systematics, museum science, and conservation education. Responsibilities of the head include intellectual and philosophical leadership of faculty, staff, and students, to maintain and strengthen the department's preeminence in wildlife and fisheries sciences; management and coordination of departmental resources; and, service as principal liaison between the department and external entities. The department head not only holds an academic appointment as professor in the College of Agriculture, but also is an officer of the Texas Agricultural Experiment Station and of the Texas Agricultural Extension Service. Qualifications include an earned Ph.D. in ecology or other discipline central to wildlife and fisheries sciences; a record of outstanding scholarly achievement and teaching effectiveness in the large-university environment; and, demonstrated capability for leadership, management, and integration of academic, research, and extension programs. Send application, including curriculum vitae and names of at least three references, by 1 April 1986 to: **Dr. William H. Neill, Chairman, Search Advisory Committee, Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, TX 77843-2258. Texas A&M University is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSISTANT/ASSOCIATE POSITION is available for 2 years to study the biochemical aspects of hibernation. Qualified applicants should have experience with HPLC, RIA's, and animal care including surgery. Salary and benefits are competitive. Candidates should send curriculum vitae and three letters of recommendation to: **Dr. Gregory L. Florant, Department of Biology Swarthmore College, Swarthmore, PA 19081.** Application deadline is 1 March 1986. *Swarthmore College is an Equal Opportunity Employer; M/F, minorities are encouraged to apply.*

RESEARCH ASSOCIATE, biochemistry, molecular biology, or allied science Ph.D.; to study heme biosynthetic enzymes using monoclonal antibody technology. Initial 1-year appointment, possible renewal. Résumé to: **M. B. Poh-Fitzpatrick, Department of Dermatology, Columbia University College of Physicians & Surgeons, 630 West 168 Street, New York, NY 10032.** *Affirmative Action/Equal Opportunity Employer.*

SCIENTIST/RECOVERY PROCESS DEVELOPMENT. Genentech, Inc., a leader in the field of biotechnology has an opening for a scientist to provide both technical leadership and active participation with co-workers engaged in research and development for the purification and characterization of proteins. The successful candidate will have a Ph.D. in biochemistry or chemical engineering and 2 to 5 years of experience in either academics or industry.

Genentech offers an excellent compensation and benefits package, coupled with the opportunity to make a significant contribution to our organization. Please send résumé to: **Human Resources Department Number 4264, Genentech, Inc., 460 Point San Bruno Boulevard, South San Francisco, CA 94080.** *An Equal Opportunity Employer.*

POSITIONS OPEN

NSERC-UNIVERSITY RESEARCH FELLOWS

The University of Saskatchewan, Department of Biology, invites applications for research professorships in the following fields: Forest ecology, vertebrate zoology, limnology, and plant pathology. Candidates who succeed in the NSERC open competition will be appointed at the assistant professor level. Remuneration will be based on the current salary scale at the University of Saskatchewan (1 April 1986: \$29,501 to \$38,009).

Applicants must hold the Ph.D. degree and have at least 2 years of postdoctoral experience. Only those who have a demonstrated ability to carry out productive and independent research of a high calibre will be considered. NSERC fellowships are open only to Canadian citizens or permanent residents of Canada.

Qualified individuals should send their curriculum vitae, a brief description of their research objectives, and the names of three referees before 15 April 1986 to:

Dr. John King, Head, Department of Biology, University of Saskatchewan, Saskatoon, Saskatchewan, Canada S7N 0W0.

RESEARCH SCIENTIST needed with Ph.D. in physics or nuclear engineering, 3 years of computational experience using the National Magnetic Fusion Energy Computer Center network, and strong written and oral communication skills. Position involves the study of plasma physics applications, and preparation of technical manuscripts and presentations. Business travel required. Forty-hour week. Salary: \$42,000 per year. Job site/interview: La Jolla, California. Send this ad and résumé no later than 1 March 1986 to: **Job number FC6357, P.O. Box 9560, Sacramento, CA 959230560.**

SOIL MICROBIOLOGY faculty position at Oregon Graduate Center Water Research Laboratory. Outstanding individual with commitment to research in pollution of natural waters and excellence in graduate teaching is sought. Appointment to be made at assistant professor level or higher. A Ph.D. in the sciences or engineering is necessary. Send curriculum vitae, one-page statement of research interests, and names, addresses, and telephone numbers of three references to: **Dr. J. F. Pankow, WRL, Oregon Graduate Center, 19600 N.W. Von Neumann Drive, Beaverton, OR 97006.** Closing date: 15 April 1986. *Affirmative Action Employer.*

VERTEBRATE BIOLOGIST position at the Jesuit university of the Pocono Northeast. Ph.D. required. September 1986. One-year sabbatical replacement. Primary duties are courses in general biology and anatomy/physiology. Send curriculum vitae and names of three references by 1 March to: **Dr. Michael Carey, Chairman, Biology Department, University of Scranton, Scranton, PA 18510.**

GRADUATE PROGRAM

GRADUATE PROGRAM DOCTORAL TRAINING IN ENVIRONMENTAL BIOLOGY PUBLIC POLICY

The Department of Biology at George Mason University offers a Ph.D. in **Environmental Biology-Public Policy** to train environmental biologists for involvement in public policy issues. A limited number of **assistantships and fellowships** are available for outstanding applicants. Write for brochure and application materials. Closing date for application is 1 March 1986. Contact: **Doctoral Coordinator, Program in Environmental Biology-Public Policy, Department of Biology, George Mason University, Fairfax, VA 22030.** *George Mason University is an Affirmative Action/Equal Opportunity Employer.*

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP—The Department of Pediatrics at the Nassau County Medical Center has an opening for a 2-year postdoctoral fellowship starting from July 1986. The fellowship carries remuneration of \$25,000 per year, without any fringe benefits. The applicant should have experience in molecular biology and/or cell biology. Send curriculum vitae to: **Dr. A. G. Palekar, Department of Pediatrics, Nassau County Medical Center, 2201 Hempstead Turnpike, East Meadow, NY 11554.**

FELLOWSHIPS

CALIFORNIA INSTITUTE OF TECHNOLOGY THE CHAIM WEIZMANN POSTDOCTORATE FELLOWSHIP FOR SCIENTIFIC RESEARCH IN GEOLOGICAL AND PLANETARY SCIENCES

Fellowships will be awarded for postdoctoral studies in geological and planetary sciences at the California Institute of Technology. These fellowships carry annual stipends of \$28,000 from fall 1986, and in addition offer a research-expense fund of \$1,000 per year. The duration of fellowships will normally be for 2 years. Applicants must be U.S. citizens.

This fellowship program has been established to offer scientists, typically within 2 years of receipt of the Ph.D., the best possible opportunity to develop their talents. Research will be encouraged in areas in which Caltech's faculty is currently active:

**Atmospheric and Planetary Science
Geochemistry and Petrology
Geology and Geobiology
Geophysics and Seismology**

Application forms may be obtained from: **Professor Peter J. Wyllie, Division of Geological and Planetary Sciences, 170-25, California Institute of Technology, Pasadena, CA 91125.** Completed applications with references should arrive at Caltech before 1 April 1986.

Fellowship candidates will automatically be considered for other available postdoctoral positions at Caltech in their fields of interest.

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

POSTDOCTORAL FELLOWSHIP PROGRAM IN TERATOLOGY AND DEVELOPMENTAL BIOLOGY

Support for training is available immediately through an NIH training grant. The program emphasizes research on molecular aspects of teratology including molecular genetics, intracellular pH regulation and behavior. Send correspondence, curriculum vitae, and three letters of recommendation to: **Dr. Ernest F. Zimmerman, Division of Basic Science Research, Children's Hospital Research Foundation, Elland and Bethesda Avenues, Cincinnati, OH 45229.**

POSTDOCTORAL FELLOWSHIP IN MOLECULAR BIOLOGY/IMMUNOLOGY OF PARASITES: University of Pennsylvania. Program seeks to apply molecular biological and immunologic techniques to the study of immunopathology and resistance induced by exposure to schistosoma, trichinella, and malaria. Opportunities exist for both basic laboratory and applied clinical studies. Please send curriculum vitae, descriptive letter of interests, and names of three references to: **S. Michael Phillips, M.D., Geographic Medicine, Immunology, 519 Johnson Pavilion, University of Pennsylvania, School of Medicine, Philadelphia, PA 19104.**

TRAINEESHIPS

POSTDOCTORAL TRAINEESHIPS IN CANCER BIOLOGY

Applications are invited for positions in the NCI supported "Training Program in Cancer Biology" of the Meyer L. Prentiss Comprehensive Cancer Center of metropolitan Detroit. This center is composed of the two campuses of Wayne State University (School of Medicine and the main campus) and the Michigan Cancer Foundation. Initial appointment will be for a period of 1 year with renewal possible. Program provides for broad training of postdoctoral trainees in areas such as: breast cancer, metastasis, cancer immunology, carcinogenesis, tumor biology, molecular biology and epidemiology, drug synthesis, and experimental therapeutics.

Trainees are selected on their potential for future excellence and achievement in cancer research and are expected to undertake significant research projects within a variety of disciplines.

APPLICATION: Submit curriculum vitae and three references to: **Dr. S. C. Brooks, Associate Director of Laboratory Research, The Meyer L. Prentiss Comprehensive Cancer Center of Metropolitan Detroit, 110 East Warren Avenue, Detroit, Michigan 48201.**

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JOIN THE TEAM THAT LEADS A LEADER.

When industry experts predicted that the medical diagnostics area would continue its huge potential for growth, they were right. At Abbott Laboratories, we have assumed the world leadership position in medical diagnostics. We revolutionized in-vitro testing, had major breakthroughs in the detection of hepatitis B and German measles, and advanced the sophistication of medical instrumentation. Our recent breakthroughs in AIDS and other areas continue to pave the way for our ongoing success. The following positions are now available in our Diagnostics Division's scientific teams.

RESEARCH AND DEVELOPMENT

Protein Biochemist/ Immunologist

This position requires a highly creative individual with a Ph.D. in biochemistry/immunology. At least 2 years of post-doctorate experience is preferred. A background in protein purification, FPLC, HPLC, the preparation of enzyme conjugates and solid phase immunoassay development is essential. **Reply to Dept. LM.**

Biochemist/Immunochemist

Seeking a uniquely creative, entrepreneurial candidate to participate in a multidisciplinary program. Ph.D. or equivalent in biochemistry, immunochemistry or protein chemistry needed to develop novel fluorescent immunoassays for new diagnostic technology. **Reply to Dept. SS.**

Protein Chemist/Biochemist

Candidate should possess a Ph.D. in biochemistry or protein chemistry to work on the development of assays for OB/GYN fertility area. Background in endocrinology helpful. **Reply to Dept. JH.**

Biochemist

Candidate should possess an M.S. or Ph.D. in the life sciences to participate in a multidisciplinary project. Experience in purification and handling of macromolecules, enzymology and solid phase or film chemistry is needed. **Reply to Dept. JB.**

Biochemists

Several positions are available for the development of automated and non-isotopic immunoassays. Experience in the development of new solid phases and the purification and characterization of antibodies or antigens is needed. Ph.D. or equivalent in biochemistry or other life sciences is essential. Industrial research experience desirable. **Reply to Dept. CD.**

Clinical Chemist

Responsibilities involve the research and development of automated clinical chemistries. A Ph.D. or equivalent in the life sciences is required; clinical experience desirable. **Reply to Dept. RD.**

Biochemist

Candidate with a Ph.D. or equivalent in biochemistry needed to design and conduct experiments involving the chemical modification of steroids and proteins, enzyme immunoassays, solid phase chemistries and affinity chromatography. Knowledge of reproductive endocrinology is a plus. **Reply to Dept. MJ.**

Microbiologist

Ph.D. or equivalent in microbiology with a strong biochemistry background to do carbohydrate/lipid analysis and enzyme kinetic work. Experience with endotoxin research is a plus. **Reply to Dept. LH.**

TECHNICAL SUPPORT

Biochemist

Candidate should possess a Ph.D. in biochemistry. Duties include the technical support of enzyme immunoassay hepatitis/AIDS products through troubleshooting and product improvement. **Reply to Dept. GM.**

Biochemist

Ph.D. with a background in endocrinology and physical biochemistry. Duties include troubleshooting, reformulation and development of diagnostic tests predominantly in the area of fluorescence polarization immunoassay. Experience with technical aspects of product support and manufacturing is highly desirable. **Reply to Dept. RB.**

Health Physicist

Primary function involves monitoring and evaluating radiation exposure and recommending and implementing proper measures. Will also be responsible for promoting good safety practices, conducting training programs, and complying with all governmental regulations. A Master's in radiological health or a Bachelor's with a minimum 6 years related experience required. **Reply to Dept. CG.**

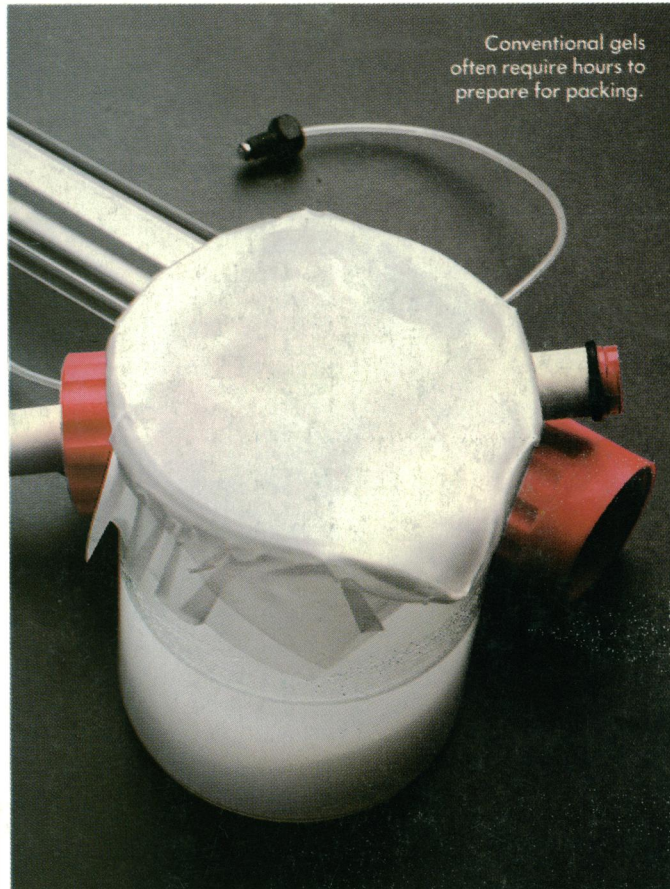
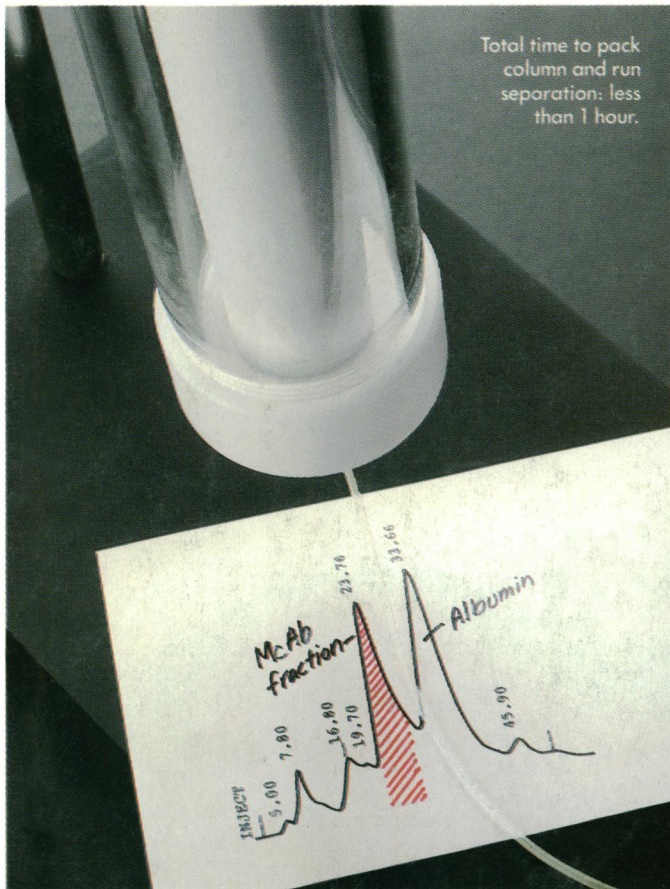
As a \$3.3 billion industry leader, Abbott offers the opportunity to contribute to an advanced scientific environment, as well as excellent salaries and benefits including profit sharing and stock purchase plans. We are headquartered in a campus-like setting in an attractive suburban area near Lake Michigan, just 30 miles north of Chicago. For confidential consideration, please send resume with salary history, indicating appropriate department number, to: Sue Hart-Wadley/Corporate Placement. Abbott is an affirmative action employer.

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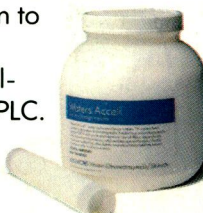
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