

physical anthropologists to archeology have generally been descriptive appendixes to site reports or publications showing little additional anthropological and biological sophistication. Weaknesses here range from the anachronistic presentation of "type" photographs of skulls to the statistical overkill of small samples unrepresentative of actual biological populations. There is a disjuncture between the provocative behavioral frameworks established in the first section of the book and the biodistance comparisons of nonbiological samples separated by thousands of years or thousands of miles or both. One hungers for an examination of the biological correlates of the social and cultural dynamics described *within* Jomon or Yayoi Japan. Therein lies the key to Japanese cultural and biological history.

DOUGLAS K. CHARLES  
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## Books Received

- Apprentice to Genius.** The Making of a Scientific Dynasty. Robert Kanigel. Macmillan, New York, 1986. xvi, 271 pp. \$19.95.
- Atlas of Dinoflagellates.** A Scanning Electron Microscope Survey. John D. Dodge. Farrand, London, and Blackwell Scientific, Palo Alto, CA, 1985. viii, 119 pp. \$25.
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- Basic Anatomy.** A Laboratory Manual. The Human Skeleton, The Cat. B. L. Allen. 3rd ed. Freeman, New York, 1986. xviii, 204 pp., illus. Paper, \$16.95.
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- Dynamics of Josephson Junctions and Circuits.** Konstantin K. Likharev. Gordon and Breach, New York, 1986. xx, 614 pp., illus. \$170.
- The Earth.** Peter J. Smith, Ed. Macmillan, New York, 1986. 256 pp., illus. \$40.
- Echinoderm Gametes and Embryos.** Thomas E. Schroeder, Ed. Academic Press, Orlando, FL, 1986. xvi, 470 pp., illus. \$79.50; paper, \$49.95. Methods in Cell Biology, vol. 27.
- The Economics of Integrated Pest Control in Irrigated Rice.** A Case Study from the Philippines. Hermann Waibel. Springer-Verlag, New York, 1986. xiv, 196 pp., illus. \$71. Crop Protection Monographs.
- Education, Training and Employment.** Towards a New Vocationalism? Roger Dale, Ed. Published in association with the Open University by Pergamon, New York, 1985. viii, 129 pp., illus. \$16.50; paper, \$8.25.
- Elliptic Structures on 3-Manifolds.** C. B. Thomas. Cambridge University Press, New York, 1986. vi, 122 pp., illus. Paper, \$16.95. London Mathematical Society Lecture Note Series, 104.
- The Enchanted Canopy.** A Journey of Discovery to the Last Unexplored Frontier, the Roof of the World's Rainforests. Andrew W. Mitchell. Macmillan, New York, 1986. 255 pp., illus. \$29.95.
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- Introduction to Lie Groups and Lie Algebras.** Arthur A. Sagle and Ralph E. Walde. Academic Press, Orlando, FL, 1986. x, 361 pp., illus. Paper, \$39.95. Reprint, 1973 edition.
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- Isotropic Assessment of Heterogeneous Catalysts.** John Happel. Academic Press, Orlando, FL, 1986. xii, 196 pp., illus. \$49.95.
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- Metal-Semiconductor Contacts and Devices.** Simon S. Cohen and Gennady Sh. Gildenblat. Academic Press, Orlando, FL, 1986. x, 424 pp., illus. \$95. VLSI Electronics Microstructure Science, vol. 13.
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- Nothing and Non-Existence.** The Transcendence of Science. William B. Turner. Philosophical Library, New York, 1986. xxiv, 431 pp., illus. \$27.50.
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- Organ Procurement 2.** Luis H. Toledo-Pereyra, Ed. Grune and Stratton (Harcourt Brace Jovanovich), Orlando, FL, 1986. xvi, 239 pp., illus. \$54.75. A Transplantation Proceedings Reprint. From a congress, Detroit, Oct. 1985.
- Photoatlas of Inclusions in Gemstones.** Eduard J. Gübelin and John I. Koivula *et al.* ABC Edition, Zurich, 1986. 532 pp. \$95.
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- Plant Virus Epidemics.** Monitoring, Modelling and Predicting Outbreaks. George D. McLean, Ronald G. Garrett, and William G. Ruesink, Eds. Academic Press, Orlando, FL, 1986. xxii, 550 pp., illus. \$71.50.
- Programming Languages.** A Grand Tour. Ellis Horowitz, Ed. 3rd ed. Computer Science Press, Rockville, MD, 1986. x, 512 pp., illus. Paper, \$39.95. Computer Software Engineering Series.
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- PSA 1986.** Proceedings of the 1986 Biennial Meeting of the Philosophy of Science Association. (Pittsburgh, PA, 1986.) Vol. 1, Contributed Papers. Arthur Fine and Peter Machamer, Eds. Philosophy of Science Association, East Lansing, MI, 1986. xxvi, 521 pp., illus. \$20; paper, \$17.50.
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- Semiconductor Physics.** V. M. Tuckevich and V. Ya. Frenkel, Eds. Nevill Mott, transl. Ed. Consultants Bureau (Plenum), New York, 1986. x, 541 pp., illus. \$89.50. Translated from the Russian.
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- Toward a New Era in U.S. Manufacturing.** The Need for a National Vision. Manufacturing Studies Board, National Research Council. National Academy Press, Washington, DC, 1986. xvi, 174 pp., illus. Paper, \$12.50.
- Toxicology of the Nasal Passages.** Craig S. Barrow, Ed. Hemisphere, New York, 1986. xviii, 317 pp., illus. \$61.95. Chemical Industry Institute of Toxicology Series. Based on a conference, Raleigh, NC, Feb. 1984.
- Trace Analysis.** Spectroscopic Methods for Molecules. Gary D. Christian and James B. Callis, Eds. Wiley-Interscience, New York, 1986. xiv, 406 pp., illus. \$55. Chemical Analysis, vol. 84.
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- USAN and the USP Dictionary of Drug Names.** Mary C. Griffiths, Carolyn A. Fleeger, and Lloyd C. Miller, Eds. United States Pharmacopoeial Convention, Rockville, MD, 1986. 690 pp., illus. Paper, \$60.
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## Products & Materials

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### *Bibliographic Software*

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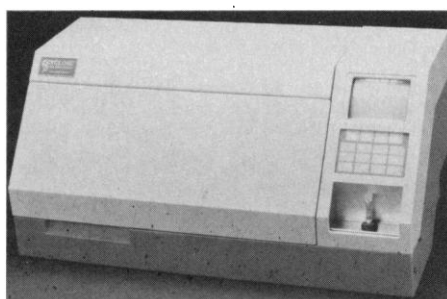
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by accessing the disk because all data is kept in memory. To operate, Datasurf requires an IBM PC or compatible computer with or without the 8087 math coprocessor, an IBM Color Graphics Adapter or compatible equipment, a minimum of 320 kilobytes of memory, and PC-DOS or MS-DOS 2.0 or higher. Bridge Software. Circle 589.

### *Molecular Modeling Software*

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### *Literature*

*HPLC Instruments Brochure* describes a line of high-performance liquid chromatography components and turnkey systems. ABI Analytical, Kratos Division. Circle 602.

*Optical Division Products and Services* is a catalog of crystals for infrared analysis and elements for internal reflection spectroscopy. J. Huley Associates. Circle 603.

*Syringe and Chromatography Product Catalog* lists syringes, syringe packs, manual dispensers, columns, and sample preparation devices. Hamilton. Circle 604.

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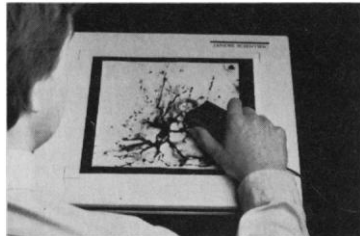


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The Department of Anatomy and Cellular Biology of the Tufts University Schools of Medicine, Dental Medicine and Veterinary Medicine invites applications for tenure-track positions. Applicants should possess a Ph.D. and/or D.V.M. degree (or equivalent). At the assistant professor level, applicants should have had at least 2 years of postdoctoral research experience, show promise of developing an independent research program, and have had some experience in teaching veterinary gross anatomy. At more senior levels, applicants must have an active, funded research program and considerable teaching experience in veterinary anatomy. Major research areas in the department include: cell and molecular biology, developmental biology, reproductive biology and neuroendocrinology. We especially seek candidates to join a group involved in molecular, cellular, and physiological studies of early development in laboratory and domestic animals, and transgenic manipulations thereof. Research in male gamete biology and preimplantation embryology are of particular interest. This group is located at our Veterinary School campus in Grafton, Massachusetts, approximately 35 miles west of Boston. This attractive and spacious campus provides unique opportunities for multidisciplinary research with large and small domestic animals. Salary and rank are dependent upon qualifications and experience. Applicants should submit curriculum vitae, names of at least three references, and a letter describing research interests and teaching experience to: **Dr. Bryan Toole, Chairman, Department of Anatomy and Cellular Biology, Tufts University Schools of Medicine, Dental Medicine and Veterinary Medicine, Boston, MA 02111.**

### ASSISTANT PROFESSOR OF WILDLIFE TERRESTRIAL VERTEBRATE ECOLOGY

A 9-month, tenure-track position located in the School of Natural Resources at the University of Michigan. Applicant must possess a doctoral degree in wildlife or terrestrial vertebrate ecology; postdoctoral and teaching experience is preferred. Applicants must demonstrate research excellence. Responsibilities will include the maintenance of a strong research program and advising graduate students in the area of terrestrial animal ecology, as well as teaching and interacting with faculty and students in an interdisciplinary program. Teaching will involve three courses in an academic year, including: wildlife ecology, vertebrate natural history, an advanced seminar in the applicant's specialization and periodic involvement in interdisciplinary team-taught courses. Applicants with some expertise and experience in conservation ecology (for example—rare species, biological diversity, wild area ecology, and so forth) are preferred. Interested candidates should send curriculum vitae and three letters of recommendation by 16 March 1987 to: **Dr. J. E. Crowfoot, Dean, School of Natural Resources, The University of Michigan, Ann Arbor, MI 48109-1115.** *The University of Michigan is an Equal Opportunity Employer.*

## POSITIONS OPEN

**DEPARTMENT OF BIOLOGY**—Applications are invited for a tenure-track **ASSISTANT PROFESSOR** position in vertebrate biology, to begin fall trimester 1987. Teaching responsibilities include: vertebrate field biology, comparative anatomy, a course in the candidate's major vertebrate group of specialization (which has traditionally been ornithology), and contributions to an interdisciplinary general curriculum. A strong field orientation and ability to involve undergraduate students in independent research projects are essential. A research interest in the area of quantitative ecology would be very valuable. Hobart and William Smith Colleges is a highly selective liberal arts institution located in the Finger Lakes region of New York state, which values both teaching and research. Applicants should arrange to have their curriculum vitae, a statement of teaching and research interests, and three letters of recommendation received by 13 March 1987. Send to: **Dr. Joel T. Kerlan, Chairman, Department of Biology, Hobart and William Smith Colleges, Geneva, NY 14456.** *An Equal Opportunity/Affirmative Action Institution.*

### ASSISTANT PROFESSOR, UNIVERSITY OF MINNESOTA MEDICAL SCHOOL DEPARTMENT OF LABORATORY MEDICINE AND PATHOLOGY

Two tenure-track faculty positions are available for candidates who hold a Ph.D. in basic biomedical sciences, with minimum of 3 years of postdoctoral experience in matrix protein isolation, purification, antibody production, or molecular biology to participate in group research effort on tumor metastasis, wound healing, and diabetic complications. Individuals will also be expected to develop individual research program in area of interest to him/her. Demonstration of research productivity is necessary.

Individuals will be involved in teaching and assisting with graduate student advising in Pathobiology Ph.D. program.

Applicants should send curriculum vitae and names of three individuals who can provide letters of reference to:

**Harry Orr, Ph.D.  
Box 198 UMHC, Department of Laboratory  
Medicine and Pathology  
420 Delaware Street SE  
Minneapolis, MN 55455**

Deadline for receipt of applications is 15 April 1987. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

### OHIO UNIVERSITY MOLECULAR AND CELLULAR BIOLOGY PROGRAM AND DEPARTMENT OF CHEMISTRY

A vacancy exists at the **ASSISTANT PROFESSOR** level for a nucleic acid biochemist to augment the research and teaching activities of the department and program. Generous start-up funds and support services (approximately \$200,000 over 3 years) are available for the appointment. Applicants should have a Ph.D. and postdoctoral experience in modern methods of molecular biology. Letters of application, curriculum vitae, and a statement of research interests and projects must be received by 15 April 1987 and applicants should also arrange for three letters of recommendation to be sent directly to: **Dr. P. Johnson, Department of Chemistry, Ohio University, Athens, OH 45701.** *Ohio University is an Affirmative Action/Equal Opportunity Employer.*

### ASSISTANT PROFESSOR OF BIOCHEMISTRY

Twelve-month tenure-track position. To teach biochemistry at the **Indiana University School of Medicine.** Applicant must possess an earned doctoral degree in biochemistry with at least 2 years of postdoctoral experience. The successful candidate is expected to develop independent/collaborative research and graduate education programs. Academic duties include shared lecture and laboratory responsibility in the freshman Medical Biochemistry Program. Submit curriculum vitae and three letters of recommendation to: **Dr. Walter X. Balcavage, Chairman Biochemistry Search Committee, Terre Haute Center for Medical Education, Indiana University School of Medicine, 135 Holmstedt Hall, Terre Haute, IN 47809.** *Indiana University is an Affirmative Action, Equal Opportunity Employer.*

## POSITIONS OPEN

**ASSISTANT PROFESSOR—RESEARCH TRACK:** The Department of Animal Biology, School of Veterinary Medicine, University of Pennsylvania, seeks a neurophysiologist to study pulmonary afferents and the control of breathing. The starting date is January 1988. The candidate must have a Ph.D. in physiology, 3 years of postdoctoral training, and extensive experience with intra- and extracellular recording from the mammalian CNS. Faculty members are expected to develop a strong research program and to compete successfully for extramural funding. Please submit curriculum vitae and statement of research interests, and arrange for three letters of recommendation to be sent to: **Dr. Richard Davies, Animal Biology—211E VET/6046, University of Pennsylvania, Philadelphia, PA 19104-6046.** *An Affirmative Action/Equal Opportunity Employer.*

### ASSISTANT PROFESSORS BASIC MEDICAL SCIENCES

The Fort Wayne Center for Medical Education, Indiana University School of Medicine, is seeking two full-time tenure-track basic scientists, beginning 1 July 1987 to develop courses in the first year medical school curriculum, and active and fundable research programs. Applicants should have an earned doctorate, 0 to 2 years of postdoctoral research/teaching experience, and ability to develop graduate courses in their area of specialization in the future.

Preferred areas of expertise are as follows:

- (i) **HISTOLOGIST:** Teaching experience in histology and embryology, and training in electron microscopy are desirable.
- (ii) **MICROBIOLOGIST:** Expertise in bacteriology is preferred; research in immunology, virology, or mycology is also acceptable.

Applicants should send curriculum vitae and names/addresses of three references to: **B. H. Ragatz, Ph.D., Acting Director, Fort Wayne Center for Medical Education, Indiana University School of Medicine, 2101 Coliseum Boulevard, Fort Wayne, IN 46805.**

*Indiana University is an Equal Opportunity/Affirmative Action Employer.*

An individual with postdoctoral experience and interest in toxicology is being sought to fill a tenure-track **ASSISTANT PROFESSORSHIP.** Successful candidate will be expected to develop an independent, mechanistically oriented research program. Send curriculum vitae, a statement of career goals, and three letters of recommendation to: **Dr. M. Ebadi, Professor and Chairman, Department of Pharmacology, College of Medicine, University of Nebraska Medical Center, 42 and Dewey Avenue, Omaha, NE 68105.** *Affirmative Action/Equal Opportunity Employer.*

### ASSISTANT/ASSOCIATE PROFESSOR THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

The Department of Physiology invites applications for one or two tenure-track positions from individuals with research interests in molecular or cellular physiology. We seek outstanding candidates to complement present interests in neurobiology, molecular endocrinology, cell biology, renal and cardiovascular physiology. Submissions from applicants with experience in any research area are welcome, but those studying functional aspects of hormone receptor interactions, signal transduction mechanisms, or cell-cell communication will be given first consideration.

Qualifications include a Ph.D. or M.D. degree and 3 years of postdoctoral research experience. The successful candidate(s) will join a diverse and interactive faculty. He/she will be expected to develop a vigorous independent research program and participate in departmental teaching. The department and university provide an outstanding environment for faculty development.

Completed applications should include a detailed curriculum vitae, a description of future research plans, copies of two recent publications, and letters from three references. This material should be received prior to 15 April 1987. Address correspondence to:

**Chairman, Physiology Search Committee  
Department of Physiology 206 H  
University of North Carolina at Chapel Hill  
Chapel Hill, NC 27514**

*The University of North Carolina is an Equal Opportunity/Affirmative Action Employer.*

Integrated Genetics, Inc., a recognized leader in biotechnology, develops therapeutic and diagnostic products for the health-care industry in a challenging and stimulating scientific environment. Our continued success leads to these new opportunities.

## SENIOR STAFF SCIENTIST

The successful candidate will initiate a research program in the production of human monoclonal antibodies. Requirements are a PhD in Cellular Immunology and at least 3 yrs.' post-doctoral experience in the production of monoclonal antibodies and/or molecular immunology. An outstanding record of publications and references from leaders in their field will be a major criteria for selection.

## STAFF SCIENTIST

An experienced scientist is needed to initiate a program in genetic engineering of immunoglobulins. A PhD in Molecular Biology or Immunology is required as is a minimum of 2 yrs.' post-doctoral experience in cloning, manipulation and re-expression of genes which encode antibodies.

**Integrated Genetics offers an attractive compensation and benefits package, including equity participation. For immediate consideration, send your resume to: David Nikka, Human Resources Dept. S220, Integrated Genetics, Inc., 31 New York Avenue, Framingham, Massachusetts 01701.**

An equal opportunity employer



# Professor and Chairperson

## Department of Neurobiology and Behavior

The State University of New York at Stony Brook invites applications for the position of Chairperson of the Department of Neurobiology Behavior.

The department presently consists of 19 faculty, whose research interests span the range from molecular through integrative neuroscience.

As a joint department of the College of Arts and Sciences and the Health Sciences Center, the department serves as a focus for the large community of neuroscientists in other departments of the University and the Medical School. We seek a

distinguished scientist to provide vigorous academic leadership.

Nominations and applications (including Curriculum Vitae) should be submitted by no later than May 1, 1987 to: Dr. David C. Glass, Chair, Search Committee for Chair of Neurobiology & Behavior, c/o Department of Psychology, SUNY Stony Brook, Stony Brook, NY 11794-2500. Telephone: (516) 632-7832.

SUNY Stony Brook is an affirmative action/equal opportunity educator and employer. AK#336-B.

## Biosensor Breakthrough

Molecular Devices Corporation is developing novel silicon-based, chemical sensor technology. This new sensor can quantitate receptor activity in reconstituted biological membranes and thus provide an electrical response to biological receptor functions. This represents a major scientific advancement and would permit rapid screening and analysis of pharmacological agents such as receptor agonists, antagonists, and toxins.

### Membrane Biophysicist

We are looking for a PhD scientist with research expertise in membrane biophysics or membrane biochemistry to play a major role in this interdisciplinary research. General knowledge of analytical chemistry and electrochemistry is desired.

To apply, please send your résumé to Human Resources, Molecular Devices Corporation, 3180 Porter Drive, Palo Alto, CA 94304. An equal opportunity employer.



## CARDIOVASCULAR PHARMACOLOGIST

The Sterling-Winthrop Research Institute, a division of Sterling Drug Inc., announces openings for Sr. Scientists in its growing Pharmacology Department.

The successful candidates will possess a Ph.D. in Cardiovascular Pharmacology/Physiology and have 3-5 years postdoctoral industrial experience in drug discovery and development. We are seeking talented scientists ready to take on the challenge of leading a drug discovery team investigating new directions/strategies to the future therapies of CHF and Hypertension respectively. Position will involve supervision of other scientific and technical staff and requires excellent communication and interpersonal skills. A record of publication demonstrating ability to undertake independent and creative research is desirable.

Located near Albany, New York, we offer an attractive salary and benefits package. Interested candidates should send curriculum vitae including salary requirements in confidence to:

**Ms. Randy E. Goldfischer**  
Employee Relations Administrator



**STERLING-WINTHROP  
RESEARCH INSTITUTE**

**Sterling Research Group**  
A Division of Sterling Drug Inc.  
Columbia Turnpike, Rensselaer, NY 12144

Equal Opportunity Employer M/F/H/V



## POSITIONS OPEN

**UNIVERSITY OF HAWAII, ASSISTANT PROFESSOR/RESEARCHER IN NEUROSCIENCES.** A neuroscientist is sought to develop an independent research program having the potential to complement existing projects of the Békésy Laboratory of Neurobiology. Persons with research interests in neurochemistry and/or in systems-level analysis of vertebrate or invertebrate CNS are encouraged to apply, but other areas will be considered as well. Supported through 1991 by a federal grant, the position may become a tenure track, state-funded position. Teaching opportunities include participation in the neurosciences core curriculum and direction of graduate students. Applicants should have a Ph.D. and postdoctoral experience, and provide evidence of independent research productivity and of potential to obtain funding. Full-year salary range, \$26,592 to \$39,360. Send curriculum vitae, statement of research interests, representative publications, and names of three references to: **Dr. I. Cooke, Békésy Laboratory of Neurobiology, 1993 East-West Road, Honolulu, HI 96822.** This is a readvertisement; applications to be accepted postmarked up to 13 March 1987. *An Equal Employment Opportunity Employer.*

**The Biology Department of San Diego State University** invites applications for three tenure-track teaching-research positions at the **ASSISTANT OR ASSOCIATE PROFESSOR** level, starting date August 1987 or 1988. Postdoctoral experience and evidence of research productivity required. **FUNGAL BIOLOGIST:** research area in higher plant-fungal interactions. **PLANT-INSECT BIOLOGIST:** research area in ecology of plant-insect interactions. **PLANT MOLECULAR BIOLOGIST:** research area in plant gene expression, development, or metabolism. Send curriculum vitae, selected reprints, a statement of professional goals, and names, addresses, and telephone numbers of three referees by 15 March 1987 to: **Chairman (appropriate), Search Committee, Biology Department, San Diego State University, San Diego, CA 92182.** *An Affirmative Action/Equal Opportunity Employer.*

### FACULTY OF PHARMACY UNIVERSITY OF TORONTO ASSISTANT OR ASSOCIATE PROFESSOR

Applications are invited for a tenure-stream post beginning 1 September 1987. The successful candidate will be expected to teach medicinal chemistry at the undergraduate and graduate levels and to develop an independent research program in an area related to the structural and mechanistic determinants of drug action. Individuals with interests and experience in fields such as genetic engineering, computational molecular biology, protein chemistry, or receptor biology are particularly encouraged to apply. Candidates must hold a Ph.D. degree or its equivalent and have at least 2 years of postdoctoral experience.

*In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and landed immigrants.*

A curriculum vitae, a one-page outline of a future research program, and three letters of reference should be forwarded by 15 May 1987 to:

**D. G. Perrier, Dean  
Faculty of Pharmacy  
University of Toronto  
19 Russell Street  
Toronto, Ontario  
Canada M5S 1A1**

**The Harry S. Truman Memorial Veterans Hospital, a Dean's Committee Hospital** attached to the Hospital of the University of Missouri-Columbia School of Medicine, is seeking a new **ASSOCIATE CHIEF OF STAFF FOR RESEARCH AND DEVELOPMENT.** The candidate should have wide understanding of biological science and be active in research. In addition the candidate must be prepared to assist investigators in grant preparation as well as administrative and committee responsibilities, occupying approximately 20% of scheduled time. Outside income may be supplemented through the University of Missouri, Columbia, MO. Please submit curriculum vitae and letters of application to: **James Butt, M.D., Chairman, Search Committee for the ACOS/R and D (111C), Harry S. Truman Memorial Veterans Hospital, 800 Hospital Drive, Columbia, MO 65201,** no later than 1 April 1987. *An Equal Opportunity Employer.*

## POSITIONS OPEN

### ALASKA PACIFIC UNIVERSITY

**Alaska Pacific University, Alaska's only four-year private university,** value-centered, sustained by a Judeo-Christian ethic and committed to an innovative, integrated curriculum and international education, seeks applicants for:

#### ASSISTANT/ASSOCIATE PROFESSOR OF GEOLOGY

Responsibilities include teaching undergraduate courses in geology, mathematics and natural resources; effective leadership in establishing a collaborate program with USGS.

Qualifications: Ph.D. in geology/earth sciences and strong background in economic/mining geology. Prior teaching experience and knowledge of Alaska resources beneficial. Previous working experience/familiarity with the USGS critical. Candidate should be committed to integrative education, be able to link theory with practice and be capable of working with a diverse multi-ethnic student body.

Send résumé including names, addresses, and phone numbers of three references to: **Dr. Raymond Z. Ritznyk, Chair, Natural Resources, Alaska Pacific University, 4101 University Drive, Anchorage, AK 99508.** Closing date: 15 March 1987 with successful candidate assuming responsibilities 15 August 1987. Salary competitive.

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

#### ASSISTANT/ASSOCIATE PROFESSOR OF TOXICOLOGY (PULMONARY CELL BIOLOGIST)

Applications are solicited for a position at the level of assistant or associate professor (tenure-track position) in the Environmental Health Sciences Center of the University of Rochester School of Medicine and Dentistry. Applicants must have a Ph.D. degree, postdoctoral experience, and a strong commitment to design and conduct studies to elucidate mechanisms of lung injury at a cellular and molecular level. The candidate should have extensive experience in using cell isolation assays and cellular functional techniques including flow cytometry to evaluate particle-cell interactions which may lead to chronic lung disease such as fibrosis. Applicants should send their curriculum vitae, reprints, and a description of their research interest by 1 April 1987 to: **Günter Oberdörster, Dr. Med. Vet., Search Committee, Box BPHYS, University of Rochester School of Medicine and Dentistry, Rochester, NY 14642.** *Equal Opportunity Employer M/F.*

#### ASSISTANT/ASSOCIATE PROFESSOR OF TOXICOLOGY (HEPATOLOGIST)

Applications are solicited for a position at the level of assistant or associate professor (tenure-track position) in the Division of Toxicology of the Rochester University School of Medicine and Dentistry. Applicants must have a Ph.D. degree, postdoctoral experience, and a strong commitment to design and conduct studies on the metabolism and transport of endogenous thiol compounds, and on toxic metals that interact with these compounds. Candidates should have extensive experience in liver perfusion techniques, measurements of biliary secretion, and isolation of liver membrane vesicles involved in transport of thiol compounds. Furthermore, a general background in physiology and toxicology is desirable. Applicants should send their curriculum vitae, reprints, and a description of their research interest by 1 April 1987 to: **Günter Oberdörster, D.V.M., Search Committee, Box BPHYS, University of Rochester School of Medicine and Dentistry, Rochester, NY 14642.** *Equal Opportunity Employer M/F.*

**BIOCHEMIST: Laboratory for the Study of Skeletal Disorders and Rehabilitation, Department of Orthopedic Surgery, Harvard Medical School and Children's Hospital, Boston.** To work on connective tissue extracellular phosphoproteins: cellular, biochemical and structural characteristics and molecular biology. Multidisciplinary laboratories.

Apply in writing, enclosing names of three references, to: **Melvin J. Glimcher, M.D., Director, Laboratory for the Study of Skeletal Disorders, Children's Hospital, 300 Longwood Avenue, Boston, MA 02115.** *Equal Opportunity Employer.*

## POSITIONS OPEN

### ASSOCIATE DEAN FOR RESEARCH

Reports to Vice President for Academic Affairs/Dean of the School of Medicine. Primary duty is to foster research activity in the School of Medicine. Includes: identifying potential sponsors; assisting faculty with proposals; facilitating interdisciplinary collaboration. Also, organizing and supervising programs for medical student and graduate student research. Supervises IRB; animal welfare committee and related research support activities. Advises on use in research of space, equipment, and other College resources. Experience in independent research and in review/management of federal research grants essential. Contact: **Frank G. Standaert, M.D., Vice President for Academic Affairs and Dean of the School of Medicine, Medical College of Ohio, C.S. 10008, Toledo, OH 43699.**

*An Equal Opportunity/Affirmative Action Employer.*

**BIOANALYTICAL CHEMIST.** WIL Research Laboratories, Incorporated, a leader in the safety evaluation industry, has a new senior-level position available for a chemist or biochemist in the Metabolism and Analytical Chemistry Department. Candidates should have strong training or experience with GC or HPLC and management interest. The new position has advancement potential in an expanding program involved with experimentation in metabolism, residue analysis or support of toxicology studies. Desirable location in north central Ohio. Send résumé to: **WIL Research Laboratories, Inc., 1407 Montgomery Township Road 805, Ashland, OH 44805.**

### BIOLOGICAL AND CHEMICAL SAFETY OFFICER

**The University of Texas Health Science Center at Dallas (UTHSCD)** seeks a safety professional to conduct a program in biological and chemical safety. Duties include devising strategies for compliance with regulations and guidelines and implementing final policies. Required: M.S. or Ph.D. in industrial hygiene, or related field; 5 years of experience in laboratory safety; excellent written and verbal skills. Send résumés by 15 March 1987, to: **Dr. Paul A. Van Dreal, Chairman, Search Committee, UTHSCD, 5323 Harry Hines Boulevard, Dallas, TX 75235-9072.**

### BIOLOGY

Villanova University, a medium-size, co-educational institution located 10 miles outside Philadelphia, is conducting a search for a **POSTDOCTORAL RESEARCH ASSOCIATE.** This is a grant-funded position working in the laboratory of **Dr. R. Kelman Wieder.** Individual will participate in a study evaluating the biogeochemical processes responsible for heavy metal retention in *Sphagnum* wetlands. Specific foci include mechanisms of metal binding to organic peat and microbial transformations involving iron and manganese.

Position available May 1987; deadline for submitting information is 20 March 1987. Salary is \$17,000 per annum with competitive benefits package. Candidates with Ph.D. in biology or related science with lab and/or field experience in biogeochemistry, microbiology or biochemistry should forward résumé, with summary of research interests/goals and the names, addresses and telephone numbers of three references to:

**Villanova University  
Personnel Office  
Stone Hall  
Villanova, PA 19085**

*Affirmative Action/Equal Opportunity Employment/M/F.*

**CHAIRMAN, DEPARTMENT OF ANATOMY LOUISIANA STATE UNIVERSITY MEDICAL CENTER, SHREVEPORT.** The School of Medicine invites nominations and applications for the chairmanship of an expanding Department of Anatomy. Candidates with experience in anatomy and/or cell biology must have an outstanding record of research, strong commitment to medical and graduate education and the vision and experience to lead a department of excellence. Applicants must provide curriculum vitae, names of three references, and a statement of research interests to: **Dr. James E. Smith, Chairman, Anatomy and Cell Biology Search Committee, Louisiana State University Medical Center, P.O. Box 33932, Shreveport, LA 71130.** *Affirmative Action/Equal Opportunity Employer.*

## DEPUTY DIRECTOR FOR TECHNICAL OPERATIONS

The Princeton Plasma Physics Laboratory, one of the world's leading laboratories engaged in the development of magnetic fusion as an inexhaustible energy source, seeks a Deputy Director for Technical Operations who will be responsible for the Laboratory's major experimental projects—TFTR, PBX, and smaller machines—the proposed new CIT device, and the facilities and activities that support these projects.

The principal responsibilities of the Deputy Director will include the management of day-to-day technical operations in accordance with the Laboratory's research program, the construction and maintenance of experimental facilities, and the allocation of support facilities and personnel.

The essential qualifications for this position are broad experience in advanced technologies, and an international reputation for the successful management of large technical enterprises. Other requirements are familiarity with government operations and procedures, particularly those concerned with the support of scientific projects, and experience with the interactions of academic, industrial, and FFR&D institutions.

The Laboratory offers stimulating and challenging work, a salary fully commensurate with experience, and a comprehensive benefit package.

Please forward a detailed resume and salary requirements to:

Dr. Harold P. Furth, Director  
Princeton Plasma Physics Laboratory  
Post Office Box 451  
Princeton, New Jersey 08544

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**Plasma Physics  
Laboratory**  
*Princeton University*

## Research Scientist

### Cell Culture Biologist

Since our founding in 1983, we have established ourselves as a pioneer in the development of pediatric vaccines for childhood infectious diseases. Our research staff needs your specialized talents in cell biology.

In this vital, results-oriented position, you'll have responsibility for developing and testing mammalian cell culture systems utilizing current state-of-the-art technology for high-density cell growth, product isolation and purification. Activities will also include overall management and quality control of tissue culture work related to cell and virus stocks. Credentials must include a minimum of an MS (PhD preferred) in Cell Biology and at least 3 years related experience.

Salary is commensurate with academic and professional qualifications. For prompt, fully confidential consideration, please send your resume/curriculum vitae to:  
**Praxis Biologics, Human Resources Department,**  
300 East River Road, Rochester, NY 14623.

**PRAXIS  
BIOLOGICS**

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## PUBLIC AFFAIRS CHIEF

The Space Telescope Science Institute (ST ScI), located on the Homewood Campus of The Johns Hopkins University, invites applications for the position of Public Affairs Chief.

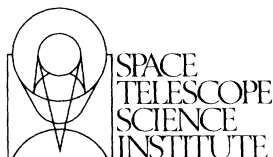
ST ScI will be the site of science operations for NASA's Hubble Space Telescope scheduled for launch in late 1988. The Public Affairs Chief will have overall responsibility for planning, implementing, and administering the Office of Public Affairs with the primary purpose of disseminating information on the activities and results of science obtained with the Hubble Space Telescope.

Responsibilities will include providing technical support of NASA public relations activities; liaison with media, the scientific community, governmental officials, and the general public; sponsorship and development of outreach programs and promotion of educational programs; development of TV production and computer graphics capabilities; and coordination of the Amateur Astronomers' program.

The successful candidate must possess the ability to interact successfully with the media, scientific community and the general public; gather and interpret for the public the scientific results from HST; plan and administer an effective public relations program; develop audio-visual programs, either in house or by use of contractors, and evaluate their effectiveness.

Candidates must have demonstrated ability within the communication field. They should minimally possess a Master's Degree in Astronomy or a related field, and have extensive experience in the communication of astronomical information to scientific and lay audiences. Related experience in a university, observatory, planetarium, or science center environment is preferred. Candidates must possess proven managerial skills, excellent oral and written communication skills and a high degree of initiative, judgement, and tact.

ST ScI offers an atmosphere of intellectual stimulation and reward, a competitive salary and an excellent comprehensive benefits package. Interested persons should submit a resume, writing samples, and the names of three references to Susan Bonyton, Space Telescope Science Institute, 3700 San Martin Drive, Baltimore, MD 21218. An Equal Opportunity, Affirmative Action Employer, M/F/H/V.



**GUIDEL, a rapidly growing pharmaceutical company in La Jolla, California, invites applicants for the position of**

### RESEARCH SCIENTISTS

Scientists sought to develop advanced rapid enzyme immunodiagnostic products. Successful candidates will be talented, well-trained Ph.D.'s or M.D.'s with background in monoclonal antibody technology, immunochemistry and biochemistry and a desire to perform bench research. Positions available for entry-level scientists as well as individuals with demonstrated ability to develop state-of-the-art rapid enzyme immunoassays and bring product through research into development.

Salary is commensurate with background and experience. Excellent benefits package which includes employee incentive stock option program. Send your resume to:

**GUIDEL  
Personnel Department  
Attn: Director of Personnel**

**GUIDEL** 11077 North Torrey Pines Rd., La Jolla, CA 92037

## POSITIONS OPEN

**BIOLOGY ASSISTANT PROFESSOR, TENURE-TRACK POSITION** September 1987. Expertise in microbiology or animal ecology required. Strong commitment to teaching at the undergraduate level and willingness to participate in teaching introductory general biology is essential. Ph.D. preferred, ABD considered. Send résumé, transcripts, and three letters of reference by 16 March 1987 to: **Personnel Director, Southwest State University (SSU), Marshall, MN 56258.** SSU is an Equal Opportunity Educator and Employer.

### CHAIRMAN DEPARTMENT OF BIOLOGY

**Princeton University** is seeking applicants for the position of **PROFESSOR AND CHAIRMAN OF THE DEPARTMENT OF BIOLOGY.** This department has investigators working in the areas of developmental and cell biology, ecology, evolution, and behavior. Close interactions are maintained with the Departments of Molecular Biology and other science departments. The chairman will have the opportunity to recruit new faculty and is expected to play a central role in the future development of the department and the life sciences program at the university. It is also expected that the chairman will provide strong administrative leadership to the department, maintain an active research program, and carry out teaching responsibilities.

Please send curriculum vitae with names of three references to: **Dr. Arnold J. Levine, c/o Laima Cole, Department of Biology, Lewis Thomas Laboratory, Princeton University, Princeton, NJ 08544.** Princeton University is an Equal Opportunity/Affirmative Action Employer, M/F.

### CHAIRMAN DEPARTMENT OF PHYSIOLOGY

The Medical College of Ohio, a free-standing state-supported academic health science center, invites applications and nominations for the position of **Chairman of the Department of Physiology.** The nominees should have distinguished records of accomplishments in biomedical research, and appropriate experience in medical and graduate education. The successful candidate will be expected to recruit new faculty and to provide leadership in the development of new programs in molecular and cellular physiology. Nominations and applications should be received no later than 15 March 1987, and should be addressed to: **Amir Askari, Ph.D., Chairman, Search Committee for Physiology Chairman, Department of Pharmacology, Medical College of Ohio, Toledo, OH 43699.** Equal Opportunity Employer

**DEPARTMENT OF PSYCHOLOGY, UNIVERSITY OF NEW ORLEANS** is searching for a **CHAIRPERSON** and also a **SENIOR FACULTY MEMBER** to begin fall 1987. The department has 20 faculty members, and Ph.D. programs in applied biopsychology and applied developmental psychology. Applicants with a record of superior research accomplishments and a consistent history of extramural funding should send a curriculum vitae and have three letters of reference sent to: **James May, Ph.D., Professor and Chair, Department of Psychology, University of New Orleans, New Orleans, LA 70148.**

**CHEMIST** to conduct basic original research on the chemistry of molecular rearrangements of organosilicon reactive intermediates. M.S. in chemistry with prior experience in synthesis and mechanistic studies of organosilicon compounds and use of gas chromatograph/mass spectrometer and high resolution nuclear magnetic proton and carbon-13 resonance spectrometer. Must have some refereed publications; \$16,989 per year. Send résumés to: **Iowa Department of Job Service, 330 Main Street, Ames, IA 50010. J.O. #1622635.**

### ELECTRON MICROSCOPIST COCHLEAR FINE STRUCTURE

A **STAFF ASSOCIATE POSITION** is available at Columbia University for an individual experienced in all phases of electron microscopy of the inner ear. A bachelor's degree and familiarity with the anatomy of the cochlea are prerequisites. Submit résumé to: **Dr. James P. Kelly, Fowler Laboratory for Research in Otolaryngology, Columbia University, 630 West 168 Street, New York, NY 10032.** Columbia University is an Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN



### LIFECODES CORPORATION CYTOGENETICIST

Lifecodes Corporation, a rapidly growing biotechnology company, seeks a cytogeneticist to assist with diagnostic services and participate in development of molecular genetics testing. Candidate should have a Ph.D., good communication and technical skills.

Lifecodes Corporation is located in Westchester, New York, only 30 minutes from midtown Manhattan.

To apply, send curriculum vitae and the names and telephone numbers of three references to:

**Peter A. Benn, Ph.D.  
Lifecodes Corporation  
4 Westchester Plaza  
Elmsford, NY 10523**

### DEAN OF THE COLLEGE OF MEDICINE UNIVERSITY OF SOUTH FLORIDA

The University of South Florida is inviting applications and nominations for the position of **Dean of the College of Medicine.** The college is affiliated with the H. Lee Moffitt Cancer Center and Research Institute, a Shriners pediatric orthopedic hospital, psychiatric hospital (all on campus) and two Veterans Administration Hospitals, the Tampa General Hospital and All Children's Hospital, St. Petersburg.

The Dean is the chief executive officer of the college. Responsibilities include leadership in academic policies and program development, development and maintenance of quality educational, clinical and research programs. Initiation and administration of budgets for education, research, clinical, and faculty matters are required.

This position requires a strong background in academic leadership, medical education and research, as well as some familiarity with medical center or university hospital administration. Qualified candidates must have an M.D. or M.D./Ph.D. degree.

Nominations and applications must be received by 15 May 1987. Applications should include a letter summarizing the candidate's experience, a complete curriculum vitae and names and addresses of three references. Please send all correspondence to: **H. Juergen Nord, M.D., Chairman, Search Committee, University of South Florida College of Medicine, 12901 Bruce B. Downs Boulevard, MDC Box 2, Tampa, FL 33612-4799.**

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

**DEPARTMENT HEAD, Soil and Water Science.** The Department brings together soil scientists dedicated to effective use of soil, water, climate, and energy resources in a desert environment. The department head administers the research, teaching, and extension programs within the department, coordinates the activities of the department with other units in the college and university, provides leadership in establishing goals and seeking grant support.

**QUALIFICATIONS:** Ph.D. is required with formal training in soil science, water science, or related fields. Candidate should have strong background in basic sciences and a distinguished record in research, teaching, extension and nonacademic professional activities. Experience in multidisciplinary research programs important. Candidate should possess outstanding leadership skills, and be adept at interacting with department faculty and staff, college/university administrators and general public. Knowledge of basic production agriculture as well as nonagricultural applications of soil and water science are essential. Submit résumé, names and addresses of five references knowledgeable of applicant's experience to: **Dr. Donald F. Post, Chair, Search Committee, Soil and Water Science, 429 Shantz Building, #38, University of Arizona, Tucson, AZ 85721.** Applications accepted to 15 March 1987 or until suitable applicant is identified. The University of Arizona is an Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN

**DEPUTY ASSISTANT CHIEF MEDICAL DIRECTOR FOR RESEARCH AND DEVELOPMENT (ACMD)—Veterans Administration (VA), Washington, DC.** The Deputy Assistant Chief Medical Director for Research and Development has a major role in the management of the national intramural program of investigator-initiated biomedical research in the VA facilities across the country. About 2500 projects are currently under way with an annual budget of \$180 million. We seek a physician with research and administration experience. Salary: Approximately \$72,500 and additional special pay up to \$19,000. *The VA is an Equal Opportunity Employer.* Respond with curriculum vitae to **ACMD/Research and Development (15), VA Central Office, 810 Vermont Avenue, NW, Washington, DC 20420.** Closing date: 30 March 1987.

### DIRECTOR CENTER FOR AGRICULTURAL METEOROLOGY AND CLIMATOLOGY (CAMaC)

Seek applicants to fill major academic and research position in Institute of Agriculture and Natural Resources (IANR), University of Nebraska-Lincoln. Established in 1979, CAMaC currently has a faculty of seven plus several courtesy appointees. Programs include activities in photosynthesis; evapotranspiration; water use efficiency; surface transfer processes; agricultural micrometeorology; remote sensing; climate impacts assessment; collection; processing and dissemination of weather and climate data and information; integrated pest management and environmental monitoring.

The director will be expected to devote approximately one-half time to administration and programmatic leadership. Considerable time will be devoted to program officers in federal granting and contracting agencies and scholars in other research institutions. The director reports to the IANR Deans and Directors and through them to the Vice Chancellor of the Institute of Agriculture and Natural Resources.

Position requires Ph.D. with experience in application of meteorology/climatology to agriculture and/or natural resources. Must have leadership and administrative potential. Salary and academic rank will be based on qualifications and experience. Apply by 15 April (or until suitable candidates apply thereafter) to:

**Dr. Sashi B. Verma, Search Chair  
Center for Agricultural Meteorology  
and Climatology  
242 L.W. Chase Hall  
University of Nebraska-Lincoln  
Lincoln, NE 68583-0728  
Telephone: 402-472-6702**

Affirmative Action/Equal Opportunity Employer

### DEPARTMENT OF PATHOLOGY HENRY FORD HOSPITAL TUMOR IMMUNOLOGY AND CELL BIOLOGY

Two positions are available for directing laboratories of tumor immunology and cell biology. The candidates would be expected to collaborate with current programs in tumor immunology and cell biology and develop independent programs. The tumor immunology laboratory requires experience in antigen and antibody characterization and monoclonal antibody development. The cell biology laboratory requires experience in cell isolation, culture and characterization.

Ph.D. students and postdoctoral fellows are encouraged to apply. Applicants should forward curriculum vitae and references to:

**Kenneth A. Greenawald, M.D., Ph.D.  
Chairman, Department of Pathology  
Henry Ford Hospital  
2799 West Grand Boulevard  
Detroit, MI 48202  
Equal Opportunity Employer**

**ENVIRONMENTAL ENGINEER—GS 11/12** to conduct basic research on plant canopy-atmospheric interactions as well as other engineering aspects of an environmentally controlled plant growth facility related to a long-term research program on an estuarine/watershed system. Submit a Standard Federal Form 171, résumé, and statement of research interests to: **David Correll, Smithsonian Environmental Research Center, Box 28, Edgewater, MD 21037-0028** by 6 March 1987. Equal Employment Opportunity Employer.



## POSITIONS OPEN

**DIRECTOR, DIVISION OF INFECTIOUS DISEASES:** The Department of Internal Medicine of St. Louis University School of Medicine invites applications and nominations for the position of Director of its Division of Infectious Diseases. We seek a physician-scientist with a substantial publication record and a history of peer-reviewed grant support. The Director will be responsible for organizing, developing, and leading a vigorous research-oriented Division. Generous new research space and financial support will be provided. Please forward nominations and applications to: **Coy D. Fitch, M.D., Department of Internal Medicine, St. Louis University School of Medicine, 1325 South Grand Boulevard, St. Louis, MO 63104. Equal Opportunity/Affirmative Action Employer. M/F/H/V.**

**ECOLOGISTS/ETHOLOGISTS:** The School for Field Studies seeks qualified faculty (Ph.D./A.B.D., field leadership, and research experience) for undergraduate 1-month summer courses in coral reef ecology (Virgin Islands), wildlife biology (Kenya), endangered species (Switzerland), medicinal botany (Ecuador), and population dynamics of harbor seals (Alaska), and humpback whale ecology (Gulf of Maine). Salary: \$1200 to \$2100 per month, plus travel/field expenses. Send letter, curriculum vitae, and names of three references to: **Program Director, SFS, 376 Hale Street, Beverly, MA 01915.**

### EXECUTIVE DIRECTOR

The San Diego Natural History Museum seeks an Executive Director. This museum, recently reaccredited, has strong educational programs, exhibits, and scientific research departments with extensive collections, which emphasize the botany, ornithology, mammalogy, herpetology, entomology, paleontology, marine invertebrates and mineralogy of the southwestern U.S. and adjacent areas. The director reports to a Board of Trustees, has duties of overall administration and supervision of a paid staff of 70 persons with an annual budget exceeding \$1.5 million. Must have demonstrated abilities in administration, planning and fundraising. Ph.D. required, preferably in a natural history field, and museum experience desirable. Salary and benefits commensurate with experience. To assure prompt consideration, send résumé by 15 April 1987 to: **Search Committee, San Diego Society of Natural History, P.O. Box 1390, San Diego, CA 92112. Equal Opportunity Employer.**

**FACULTY POSITION, BEHAVIORAL NEUROBIOLOGY, MOLECULAR NEUROBIOLOGY:** Tenure-track junior faculty positions are available for behavioral and molecular neurobiologists at the Department of Psychiatry, Institute for Mental Health Research, SUNY Stony Brook. All outstanding candidates in these areas will be considered, but preference will be given to those with research expertise in behavioral neuropharmacology or molecular genetics. Ph.D. and postdoctoral experience in these areas are required. Successful candidates are expected to develop an independent externally funded research program. Applicants should send their curriculum vitae, names of three references, and a summary of future research goals to: **Dr. Nisson Schechter, Department of Psychiatry and Behavioral Science, HSC T-10, SUNY Stony Brook, Stony Brook, NY 11794-8101.**

*SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer. AK #3.*

### UNIVERSITY OF QUEENSLAND Equal Opportunity in Employment is University Policy LECTURER IN ZOOLOGY

Should have a higher degree in biology with demonstrated expertise and teaching experience in the fields of population ecology and genetics.

Responsible to the head of Department of Zoology for the organizing and teaching of undergraduate courses in basic and population genetics, and participating in the teaching of other areas in Zoology. Some background in vertebrate biology desirable. Expected to develop own research areas and to supervise postgraduate projects in Zoology.

Salary per annum: \$A27,859 to \$A36,600. Appointment as soon as possible in 1987. Ref. 01387. Closing date 6 March 1987 or as soon as possible. Additional information and application forms available from the **Director, Personnel Services, University of Queensland, St. Lucia, 4067, Australia (57038).**

## SENIOR SCIENTIST Drug Disposition

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

### Transport Mechanisms

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

### Metabolic Transformation

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

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

Qualified candidates should send their curriculum vitae to:



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

Equal Opportunity Employer

## Dean, School of Medicine State University of New York at Stony Brook

The School of Medicine, the State University of New York at Stony Brook is seeking a new Dean to succeed Dr. Marvin Kuschner who is retiring next June. We seek an outstanding individual with an international reputation for scholarly activities and an excellent record of administrative achievement. The Dean must exemplify the School's mission of achieving excellence in research, patient care and teaching, and will be expected to devise creative initiatives to achieve these goals. Candidates must have an M.D. or Ph.D. degree, academic rank of Professor, and five years of administrative experience. In addition, candidates must demonstrate the leadership skills requisite to: set the highest standard for medical education; recognize and reward outstanding academic, clinical and pedagogical achievement; integrate the efforts of individual departments in achieving the School's goals; oversee the academic and clinical activities of University Hospital; master the com-

plexities of the School's financing, which come from New York State, research grant support and clinical practice income; and distill and present the collective vision of the School of Medicine to the University administration and the public.

The School of Medicine, established in 1971, is a division of the Health Sciences Center at Stony Brook. It has 420 medical students, 171 Ph.D. candidates, and a full time faculty of 288 supported by the State of New York. The total yearly salary support of \$18 million from New York State provides a solid base for the Medical School.

Interested candidates should forward curriculum vitae to Dr. Barry Collier, Professor of Medicine and Pathology, Chairman, Dean Search Committee, Division of Hematology, SUNY Stony Brook, Stony Brook, NY 11794-8151.

SUNY Stony Brook is an affirmative action/equal opportunity educator and employer. AK#328-C.

## TECHNICAL SERVICES SUPERVISOR

Immediate opening for a PhD or the equivalent with experience in Molecular Biology. Must have demonstrable skills and experience in technical writing and project administration. Must be able to work under pressure to meet publishing and marketing deadlines. The Technical Services Supervisor is a member of the New Product Launch Team and manages the flow of information between our R&D staff and international marketing units.

This is a position with a high tech growth company. We offer a competitive salary and a complete benefits program. Please send your resume and cover letter to: S. HOIST, ADMINISTRATIVE ASSISTANT, PHARMACIA P-L BIOCHEMICALS, INC., 2202 NO. BARTLETT AVENUE, MILWAUKEE, WI. 53202. We are an equal opportunity employer M/F.



**Pharmacia**  
**P-L Biochemicals**

## SYNTRO

**SYNTRO**, a biotechnology company focusing on the development of vaccines for the animal health market and selected products for the specialty chemical and human health markets, has immediate openings for senior scientists in

### IMMUNOLOGY MOLECULAR BIOLOGY

To complement existing scientific staff preference will be given to those with experience in:

Eukaryotic/viral expression systems  
Immunochemistry and monoclonal antibody production

**SYNTRO**, located in the heart of the San Diego scientific community, offers a competitive compensation package in an outstanding research environment, as well as excellent opportunities for professional growth. If you would like to contribute to the growth and development of a successful biotechnology company, please send your resume and references to:

Director of Organizational Development  
**SYNTRO CORPORATION**  
10655 Sorrento Valley Road  
San Diego, CA 92121

*an equal opportunity employer*

## BUILDING A NEW LAB?

LET THE SCIENCE FREE PRODUCT INFORMATION SERVICE PUT YOU IN TOUCH WITH THE VENDORS WHOSE PRODUCTS YOU WILL NEED.

SIMPLY WRITE US A LETTER STATING THE SPECIFICS ABOUT YOUR PROPOSED LAB AND WE WILL DO THE REST.

**WRITE TO:**

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

## Applications Specialist

*Amersham Corporation a leading supplier of technical products to the research community has an immediate opening for an Applications Specialist in our Technical Services Dept.*

*In this bench position you will supervise an applications laboratory responsible for enhancing sales of current and future biomedical research products. Specifically you will design experiments for performing various biomedical techniques with our products and will evaluate results of similar competitive products and/or procedures.*

*The ideal candidate will have an MS Degree in the life sciences (Biology, Chemistry, Biochemistry) with a strong background in immunology and at least one year of research laboratory experience including knowledge of ELISA, RIA, and immunocytochemistry. Persons possessing a bachelors degree with at least three years research laboratory experience beyond the B.S. will be considered. In addition, you must have excellent technical writing ability and be an independent thinker.*

*We are offering an excellent starting salary and an attractive benefits package including dental insurance and a 401K savings plan. For prompt consideration please send your resume with salary requirements to:*

EMPLOYMENT MANAGER  
**AMERSHAM CORPORATION**  
2636 S. Clearbrook Drive  
Arlington Heights, IL 60005-4692

*Equal Opportunity Employer M/F*

**Amersham**

## Staff Scientist

The Health Effects Institute (HEI) is an independent non-profit organization that sponsors and evaluates research on the health effects of automotive emissions. It is jointly funded by the United States Environmental Protection Agency and the domestic and foreign automotive industry. HEI is seeking a staff scientist to work with the Institute's Health Research Committee and other staff scientists to develop and oversee its research program.

Applicants should have the following qualifications: Ph.D., M.D., or equivalent degree; relevant scientific experience; an interest in science management and environmental problems; and good communication skills. Research experience in the areas of lung physiology and the pathology of chronic lung diseases is desirable. Salary commensurate with experience.

Send curriculum vitae and the names and addresses of three references to **Dr. Jane Warren, Health Effects Institute, 215 First Street, Cambridge, MA 02142, by March 16, 1987.** An Affirmative Action/Equal Opportunity Employer.

## The Health Effects Institute



# DIA TECH

## REQUEST FOR PROPOSALS

The Diagnostic Technology for Community Health (DiaTech) project seeks to develop technologically appropriate assays for the diagnosis of infectious diseases in developing countries. Existing technologies will be adapted and/or new technologies developed, including the means for production, distribution and effective implementation. DiaTech is carried out by the Program for Appropriate Technology in Health (PATH), in collaboration with the United States Agency for International Development (USAID).

Grants are awarded to qualified investigators at public or private institutions in both the developed and developing world. Grants are awarded for up to \$150,000 per year for a maximum of two years.

The following diseases are of the highest priority to the project:

- Diarrheal Diseases
- Acute Respiratory Infections
- Tuberculosis

DiaTech will consider proposals which address diseases other than those specified, for which the combination of need and opportunity exists. All proposed studies should have an applied dimension with the potential of a clearly beneficial impact on individual or community health care.

Proposals should be received by DiaTech no later than June 1, 1987. Forms for this purpose and guidelines for proposal preparation can be obtained from:

**DiaTech  
PATH  
4 Nickerson Street  
Seattle, Washington 98109-1699  
(206) 285-3500  
ATTN: Program Administrator**

Proposals will be reviewed by the Technical Advisory Group, and announcement of awards will be made on or about September 1, 1987.

**B**OEHRINGER INGELHEIM PHARMACEUTICALS, INC. a major developer, manufacturer, marketer and distributor of ethical and over-the-counter pharmaceuticals is expanding its Research and Development staff. As one of the most rapidly expanding firms in today's pharmaceutical industry we continue to search for new answers to U.S. and world health care problems. We are currently seeking candidates for the following positions.

### SENIOR / PRINCIPAL SCIENTISTS (3 POSITIONS)

Our Pharmacology Department is seeking a VIROLOGIST, IMMUNOLOGIST and CARDIOVASCULAR PHARMACOLOGIST. As a Senior / Principal Scientist, primary responsibilities will be the initiation of research ideas, design and execution of research activities and proposal of approaches to research goals. All positions require a Ph.D. in Molecular or Cellular Biology, Immunology or other discipline plus appropriate post doctoral education and experience in the area of specialty.

### SUPERVISOR, PHARMACEUTICAL TECHNOLOGY

Key responsibilities will be to coordinate product and process technology transfer from R & D to Production, and provide scientific support to the manufacturing unit. A Ph.D. in Pharmacy, Biomedical Engineering or Chemical Engineering with 2 or more years experience in Pharmaceutical processing and a background in process modeling optimization required.

### RECEPTOR BIOLOGIST

Develop receptor binding assays for application to drug discovery in our anti-inflammatory / immunology program, develop a research program in membrane isolation and characterization, perform advanced data handling and modeling techniques for receptor ligand interaction. A Ph.D. and post doctoral training and experience in Biochemistry, Pharmacology or Immunology required.

### RESEARCH COORDINATOR - SCIENTIFIC & TECHNICAL OPERATIONS

Key responsibility will be to provide coordination and support of research activities in our multi-disciplinary R & D facility. As an in-house "consultant," the incumbent will assist in the achievement of individual department and overall research and development goals. A Ph.D. or equivalent experience in Pharmacology or Biochemistry plus 5-10 years experience in research required.

Our state-of-the-art environment is combined with a highly competitive compensation / benefits package including relocation assistance. Please send your resume and salary history to Dept. JC, R & D, BOEHRINGER INGELHEIM PHARMACEUTICALS, INC., 90 East Ridge, P.O. Box 368, Ridgefield, CT 06877. An equal opportunity employer m / f / h.



# Boehringer Ingelheim

## POSITIONS OPEN

### ANTICIPATED FACULTY POSITION IN NEUROBIOLOGY UNIVERSITY OF CALIFORNIA AT SANTA BARBARA

The Department of Biological Sciences at the University of California, Santa Barbara, invites applications for an anticipated tenure-track faculty position from outstanding scientists interested in **genetic approaches to neurobiology**. Applicants must have a Ph.D. degree and postdoctoral training. The successful applicant will be expected to conduct a vigorous independent research program, contribute to teaching in a developing course sequence in neurobiology, and participate in a new interdisciplinary research program in cellular and molecular neurobiology. The assistant professor level is preferred although, in the case of an outstanding research record, a tenured appointment will be considered. The position is effective 1 July 1987. Applicants should submit their curriculum vitae, selected reprints, a brief description of previous and anticipated research, and arrange to have at least three letters of reference sent by 31 March 1987 to: **The Chairman, Department of Biological Sciences, University of California, Santa Barbara, CA 93106.** *The University of California is an Equal Opportunity/Affirmative Action Employer. Proof of U.S. citizenship or visa status will be required prior to employment (Immigration Reform and Control Act of 1986).*

### GENETIC INFORMATION SPECIALIST

The Jackson Laboratory, a nonprofit research institution on the coast of Maine, has a position open for a Genetic Information Specialist with a master's degree or equivalent experience in genetics. The work consists of evaluating various kinds of genetic data from scientific literature and entering the data into the computer. There will be considerable communication with scientists outside and inside The Jackson Laboratory and minor laboratory assignments as required; no special laboratory skills are required. Typing skills, library and computer terminal experience important. Please send curriculum vitae, transcripts and letters of reference to: **Harold Wheeler, Employment Manager, The Jackson Laboratory, 600 Main Street, Bar Harbor, ME 04609. Telephone 207-288-3371.** *Affirmative Action/Equal Opportunity Employer.*

### HUMAN MOLECULAR GENETICIST

The Department of Human Genetics of Virginia Commonwealth University/Medical College of Virginia is seeking applications for an assistant professor, tenure-track position. Candidates must have a doctoral degree, at least 2 years of postdoctoral experience and a strong background in Human Genetics. The successful candidate will be expected to establish an independent research program and to participate in graduate studies. To apply, send curriculum vitae and three letters of reference to: **Dr. Walter Nance, Box 33, MCV Station, Richmond, VA 23298-0001.** Deadline for applications is 27 March 1987.

*Equal Opportunity/Affirmative Action Employer.  
Women and Minorities are encouraged to apply.*

### MOLECULAR GENETICS— NEUROBIOLOGIST

Tenure-track position in the Andrus Gerontology Center and the Department of Biological Sciences. To establish a new laboratory research program in the general area of molecular genetics—neurobiology, with strong interests in aging and age-dependent neurological disease. This laboratory will be affiliated with the new university-wide Neural, Informational and Behavioral Sciences (NIBS) program. This position is being recruited at the assistant professor level. However, more senior appointments will be considered. Please send curriculum vitae, bibliography, names of four references and a brief description of career goals and research objectives by 1 May 1987 to:

**Dr. Caleb Finch  
Chairman, Search Committee  
Molecular Genetics—Neurobiologist  
Department of Biological Sciences  
University of Southern California  
University Park  
Los Angeles, CA 90089-0371**

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

## POSITIONS OPEN

### IMMUNOCHEMIST/IMMUNOLOGIST

Nonprofit research organization is seeking a Ph.D. with interest in immunoassays to direct applied research aimed at developing products for commercial applications. Consultation available from team of nationally recognized investigators. Applicants should recognize that this position involves **product-oriented** research. At least 2 years of postdoctoral experience, record of research achievement, and ability to manage projects independently are required. Background in genetics desirable. Competitive salary. Midwest location. Send curriculum vitae and particulars to: **Box 15, SCIENCE.**

### IMMUNOCHEMIST/IMMUNOLOGIST

For studies of cytochromes P-450, **Laboratory of Molecular Carcinogenesis, National Cancer Institute, National Institutes of Health, Public Health Service.** Position of Senior Staff Fellow to use immunological and immunochemical approaches, particularly monoclonal antibodies to study cytochrome P-450 immunochemistry, their multiplicity, structure and function, their role in the metabolism, activation, and detoxification of xenobiotic carcinogens, drugs, and endogenous compounds. Salary range: \$20,688 to \$41,358. Send curriculum vitae and three letters of reference to: **Dr. Harry V. Gelboin, Chief, Laboratory of Molecular Carcinogenesis, National Cancer Institute, National Institutes of Health, 9000 Rockville Pike, 37/3E24, Bethesda, MD 20892.** *An Equal Opportunity Employer.*

### MARINE CHEMIST

Applications are solicited for a tenure-track **ASSISTANT PROFESSORSHIP** in organic or inorganic marine chemistry at the University of Georgia effective fall 1987. The position will be in one of several academic departments depending on the candidate's research interests. Interaction with marine biologists, microbiologists, geologists, and oceanographers on campus and coastal laboratories will be encouraged. Send curriculum vitae, statement of research interests, and reprints of publications to: **Director, Marine Sciences, Ecology Building, University of Georgia, Athens, GA 30602.** All applications must be postmarked by 15 April 1987. *The University of Georgia is an Equal Opportunity/Affirmative Action Institution.*

**MICROBIAL GENETICIST/MEDICAL MICROBIOLOGIST.** Assistant to Associate Professor, tenure-track, 12-month appointment starting 1 July 1987. Applicant should have a Ph.D. and postdoctoral experience in microbial genetics and molecular biology and be able to participate with other faculty members in teaching a medical curriculum course in microbiology. The individual will be expected to present an advanced course in microbial genetics in the graduate curriculum and to develop an independent research program in the field. Salary will be commensurate with experience. Submit curriculum vitae, summary of research interests, and names of three references by 15 March 1987 to: **Dr. Albert G. Moat, Professor and Chairman, Department of Microbiology, Marshall University School of Medicine, 1542 Spring Valley Drive, Huntington, WV 25704-2901.** *Marshall University, a state university of West Virginia, is an Equal Opportunity/Affirmative Action Employer.*

### MOLECULAR AND CELL BIOLOGY/ BIOCHEMISTRY/BIPHYSICS Postdoctoral Opportunities

Broad range of membrane research projects: (i) nature of lipid-protein interaction in membranes; membrane dynamics; (ii) membrane reconstitution; (iii) enzyme and protein chemistry; (iv) cloning and site-specific mutagenesis of membrane proteins; and (v) muscle physiology— $\text{Ca}^{2+}$  release mechanism in excitation-contraction coupling.

Send curriculum vitae bibliography, three letters of recommendation, and short statement regarding career goals, interest, and experience to: **Professor S. Fleischer, Department of Molecular Biology, Vanderbilt University, Nashville, TN 37235.**

*An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### MEDICINAL CHEMIST

The Division of Pharmacology and Medicinal Chemistry invites applications for a tenure-track faculty position in medicinal chemistry at the rank of assistant or associate professor commensurate with experience. The Division offers a stimulating interdisciplinary research environment with M.S. and Ph.D. programs and excellent research facilities including molecular graphic computers, synthetic, and enzyme isolation laboratories as well as the opportunity for close collaboration with other units of the Medical Center. The successful candidate will demonstrate the ability to maintain an active, extramurally funded research program, direct graduate students, and participate in graduate and undergraduate instruction. Applicants for the position should possess a Ph.D. degree with training in medicinal chemistry, bioorganic chemistry, computer-assisted drug design (computational chemistry), or related areas. Postdoctoral experience is required. Salary is competitive and appropriate to qualifications. The position is available 1 September 1987. Applicants should submit a résumé, a statement of research program interests and objectives, and the names, addresses, and telephone numbers of three references by 15 April 1987 to: **Dr. Vernon R. Grund, Chairman, Division of Pharmacology and Medicinal Chemistry, College of Pharmacy, University of Cincinnati Medical Center, Cincinnati, OH 45267-0004.** *The University of Cincinnati is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minority groups.*

**MICROBIOLOGY, ASSISTANT PROFESSOR.** Tenure-track position, to teach introductory courses in microbiology and upper-level courses in virology, microbial genetics and tissue culture. **Qualifications:** earned Ph.D. with a solid background in microbiology; teaching experience is desirable; education and/or experience in virology and tissue culture essential. Submit letter of application by 15 May 1987 to: **Mr. Peter A. Tencerowicz, Chairperson, Department of Biology, Southern Connecticut State University, 501 Crescent Street, New Haven, CT 06515.** *Affirmative Action/Equal Opportunity Employment.*

**MOLECULAR GENETICIST:** Applications are invited for a tenure-track position in molecular genetics. Candidates must have at least 2 years of postdoctoral training in the broad field of molecular genetics. Primary responsibilities of the candidate will be the development of a teaching program for medical and graduate students, and the establishment of an independent research program in the general area of molecular genetics. Applicants should submit curriculum vitae with names of three references to: **The Dean, Faculty of Medicine, Technion, P.O.B. 9649, Haifa 31096, Israel.**

### MYCOBACTERIOLOGIST

The Wadsworth Center for Laboratories and Research is seeking an experienced, clinically oriented Ph.D. or M.D. to head a mycobacteriology reference diagnostic and research laboratory. Responsibilities will include: (i) direction of the laboratory of mycobacteriology, with particular expertise in cultural identification and antibiotic susceptibility testing, (ii) conduct of basic and applied research of public health relevance, (iii) administration of proficiency testing program in mycobacteriology, (iv) consultation and educational activities, (v) support to epidemiologic investigations and disease control efforts at the State and National levels.

Send curriculum vitae, statement of research goals, and names of three references to: **Felix H. Heilpern, Wadsworth Center for Laboratories and Research, Empire State Plaza, Albany, NY 12201.** *An Affirmative Action/Equal Opportunity Employer.*

**NATURAL SCIENTIST/COMPUTER RESOURCE PERSON:** Permanent, full-time position starting August 1987 teaching introductory computer courses on existing micros (Apples); courses complementary to existing ecology, forestry, and wildlife programs; and acting as a computer resource person. Send curriculum vitae, letter of interests, and names and telephone numbers of three references by 6 March 1987 to: **Ms. Susan Gawler, Center of Environmental Sciences, Unity College, Unity, ME 04988; Telephone: 207-948-3131.** *An Equal Opportunity Employer.*

**NATIONAL INSTITUTE ON AGING  
NATIONAL INSTITUTES OF HEALTH  
Public Health Service**

The Laboratory of Neurosciences, National Institute on Aging, National Institutes of Health, invites applications for a Staff Fellowship position to study molecular biological aspects of aging brain and human neuropathological disorders. The successful candidate will be expected to carry out research that will complement some of the following areas of investigation: (1) characterization of the molecular changes in the aging rat brain and in the postmortem human brain in relation to Alzheimer's disease; (2) examination of proto-oncogene and growth factor expression in the CNS and in specific neuronal populations; (3) examination of altered gene expression in a trisomic mouse model of Down's syndrome.

Applications are invited from individuals having a Ph.D., M.D., or combined degrees plus experience in either of the following: molecular approaches to gene expression, in situ hybridization or neuroanatomy. Salary range is \$17,000 to \$47,788 per annum commensurate with qualifications. Interested candidates should submit their Curriculum Vitae to **Stanley I. Rapoport, M.D., Chief, Laboratory of Neurosciences, National Institute on Aging, Building 10, Room 6C 103, 9000 Rockville Pike, National Institutes of Health, Bethesda, Maryland 20892.**

*An Equal Opportunity Employer*

**AUSTRALIA  
CSIRO**

**PHYSIOLOGICAL PLANT PATHOLOGIST  
A\$28,107-A\$41,339  
LABORATORY FOR RURAL RESEARCH  
PERTH WA**

CSIRO conducts scientific and technological research in laboratories located throughout Australia and employs about 7400 staff, of whom some 2800 are professional scientists. As Australia's main strategic research organization, CSIRO's stated role is research in support of major sectors of the Australian economy, and the effective transfer of its results to users.

**GENERAL:** Dryland Crops and Soils is a multidisciplinary research program established in 1984 by the Divisions of Plant Industry and Soils. Based in the Laboratory for Rural Research in Perth, Western Australia, the program aims to provide understanding of and management options for improved crop production in coarse textured and texture-contrast soils in Mediterranean climate zones of Australia. In areas of the wheat-growing regions of WA, root diseases severely limit crop production. Take-all (*Gaeumannomyces graminis*) is one of the major root diseases limiting the production of cereals, particularly wheat.

**DUTIES:** In collaboration with the crop physiologists, root biologists and soil scientists in the program, the appointee will be expected to initiate research in the field and glasshouse aimed at understanding the influence of soil management and environmental factors (mineral nutrition and water status), on the physiological basis of susceptibility of wheat to take-all (*Gaeumannomyces graminis*).

**QUALIFICATIONS:** A PhD degree or equivalent qualifications in plant pathology. Experience with root pathology and root biology would be preferred. A good background in plant physiology/biochemistry is essential.

**TENURE:** A term of 3 years with Australian Government superannuation benefits available.

**APPLICATIONS:** Stating relevant personal particulars, including details of qualifications and experience, the names of at least two professional referees and quoting reference No A4632, should be directed to:

**The Chairman  
CSIRO Laboratory for Rural Research  
Private Bag  
PO WEMBLEY 6014, WESTERN AUSTRALIA.**

By March 20, 1987.

*CSIRO IS AN EQUAL OPPORTUNITY EMPLOYER*

**POSITION AVAILABLE**

**DIRECTOR, NATIONAL INSTITUTE OF MENTAL HEALTH,  
ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION  
PUBLIC HEALTH SERVICE  
DEPARTMENT OF HEALTH AND HUMAN SERVICES**

The Alcohol, Drug Abuse, and Mental Health Administration invites nominations and applications for the position of Director, National Institute of Mental Health (NIMH).

This is a Senior Executive Service position in the career Civil Service, with an annual salary range of \$63,200 to \$72,500. Physicians may also be eligible for a Physicians' Comparability Allowance of up to \$10,000 per year. The position is located in Rockville, Maryland.

The National Institute of Mental Health provides leadership for the Federal effort in the promotion of mental health. Its programs include intramural and extramural research, the administration of training programs to meet national mental health manpower needs, and the provision of technical services to States and communities. The Director manages a staff of 1,000 and a budget of \$342 million.

Minimum qualifications requirements include a degree of Doctor of Medicine, Doctor of Osteopathy, or a bachelor's or higher degree in an academic field relating to the health sciences, and progressively responsible experience in

developing, administering, and evaluating mental health programs. Candidates must also have experience in the management of mental health programs, demonstrating competence to assume leadership in planning, staffing, directing, coordinating and allocating resources, and other responsibilities associated with executive leadership of a major national program.

Further information about the position and qualification requirements may be obtained by contacting Ms. Lois Mercer at 301/443-5030. Applications (Application for Federal Employment, SF 171) accompanied by a current curriculum vitae and bibliography should be submitted to Ms. Mercer at the Division of Personnel Management, Alcohol, Drug Abuse, and Mental Health Administration, 5600 Fishers Lane, Room 15C-26, Rockville, Maryland 20857. Applications will be accepted without the SF 171, provided that the SF 171 is submitted upon request. Nominations and applications should be submitted by March 9, 1987.

Applications from women and minority group members are especially solicited.

*THE ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION  
IS AN EQUAL OPPORTUNITY EMPLOYER.*



## Goddard Space Flight Center

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### DIRECTOR OF SPACE AND EARTH SCIENCES

Scientific leader of NASA's largest Space Science organization

750 scientists and engineers

#### 6 Laboratories

Laboratory for Atmospheres  
Laboratory for Terrestrial Physics  
Laboratory for High Energy Astrophysics  
Laboratory for Oceans  
Laboratory for Astronomy and Solar Physics  
Laboratory for Extraterrestrial Physics

Goddard Institute for Space Studies (New York)

#### 2 Divisions

Space Data and Computing Division  
Administration and Resources Management Division

#### 2 Project Management Offices

Crustal Dynamics Project  
Orbiting Satellites Project

Reporting to the Director, Goddard Space Flight Center, the position is in the Senior Executive Service; salary range is \$61,296-72,300, depending upon qualifications.

Candidates must have a Ph.D. or equivalent education or experience, and a research background in space and/or earth sciences including a substantial record of publications and/or significant responsibility for guidance of the scientific content of major programs in the space and/or earth sciences. Candidates must have demonstrated an ability to provide interdisciplinary program leadership, and to direct and participate in programs and projects in a broad spectrum of theoretical and experimental research in the space and/or earth sciences. A familiarity with the content, objectives and purposes of NASA's scientific program is highly desirable.

A Standard Form 171, Application for Federal Employment (available at Federal Job Information Centers or from the address below), should be sent to **NASA/Goddard Space Flight Center, Attention: Ms. Arletta Love, Code 221, Greenbelt, Md. 20771**. Applications will be accepted through March 31, 1987.

For further information and application forms, please call 301-286-8319 (Ms. Arletta Love)



U.S. CITIZENSHIP REQUIRED  
AN EQUAL OPPORTUNITY EMPLOYER

GSFC

## POSTDOCTORAL RESEARCH SCIENTISTS

The Monsanto Biological Sciences Department is currently looking for two postdoctoral scientists to work in its research facility in St. Louis, Missouri.

### Protein Chemistry Group

In this position you will study the purification and characterization of proteins produced in *E. coli* by rDNA methods, particularly the precursors of atrial peptides and related proteins. You will be part of an ongoing collaboration with the Pharmacology Department, Washington University Medical School, St. Louis. The collaborative project involves the pharmacology and physiology of the proteins as well as their in vivo and in vitro processing. Previous experience in protein purification and protein chemistry is desired.

### Protein Engineering Group

You will work on a topical problem related to the understanding of protein structure-function relationships. The design, production and characterization of novel proteins will be emphasized. Previous experience in gene cloning and expression is desired.

For consideration, send a resume and 3 letters of reference to: **John Bussen; MONSANTO COMPANY; BB5B-GB; 700 Chesterfield Village Parkway; Chesterfield, MO 63198**. An Equal Opportunity Employer M/F/H/V.

# Monsanto



## OHIO STATE BIOTECHNOLOGY CENTER

The Ohio State Biotechnology Center seeks six exceptionally innovative scientists to join its faculty at any academic rank. This Center will be composed of 30 new research groups, occupying a newly remodeled, 90,000 square foot building, and will coordinate biotechnology research programs conducted by research groups throughout this comprehensive university. The Center faculty will hold joint appointments with a basic or applied science department within one of the colleges.

The Center expects to develop three major research areas based on the current strengths within the university. The first area to be developed is designated "Plants, Microbes and their Interactions." The university already has strong research programs in fungal molecular biology and plant microbe interactions, and a group of talented young plant molecular biologists have recently joined the university. The six additional scientists will strengthen the research in this area and hold joint appointments in one of the academic departments in the College of Biological Sciences such as Microbiology or Molecular Genetics or in the College of Agriculture in departments such

as Agronomy or Plant Pathology. Individuals with strong research programs in the molecular biology of either plants or microbes, are encouraged to apply.

As development of the Biotechnology Center proceeds, we will build on other areas to create an exciting environment for biotechnological research in this university, which has all of the basic and professional schools in one campus. Access to established graduate programs, modern research facilities, attractive start-up funds, as well as competitive salaries and benefits will be provided.

Columbus, the State Capital, is a growing metropolitan area of more than a million people situated within 500 miles of most of the major midwestern and eastern metropolitan areas of the U.S. and Canada.

Send nominations and applications including C. V., references and a brief statement of research plans to P. E. Kolattukudy, Director, Ohio State Biotechnology Center, Rightmire Hall, The Ohio State University, Columbus, Ohio 43210 by **March 15, 1987**.

Equal Opportunity Affirmative Employer

The Ohio State University



**NATIONAL INSTITUTE ON AGING  
NATIONAL INSTITUTES OF HEALTH  
Public Health Service**

The Laboratory of Neurosciences, National Institute on Aging, National Institutes of Health, invites applications for a Staff Fellowship position to study electrical properties of neuronal cell membranes during development in tissue culture. Research will involve: (1) growing mammalian neurons in culture; (2) examining action potential and membrane properties with intracellular microelectrodes; (3) performing voltage and current clamping to identify and characterize individual membrane currents; (4) using patch clamp recording techniques to characterize kinetics of individual ionic channels and analyze channel number. Experiments will be done in relation to morphological and neurochemical analyses. The position is that of a Staff Fellow, Senior Staff Fellow or Medical Staff Fellow, with a salary of \$17,000 to \$47,788 per annum commensurate with qualifications. Appointments vary in duration from 1 to 7 years. The position is located in Bethesda, Maryland, and is available immediately.

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

*An Equal Opportunity Employer*

**Molecular Biologists  
Immunologists  
Protein/Configuration  
Chemists  
Cell Culture Specialists**

ImClone Systems, an innovative, rapidly expanding biotechnology company located in New York City, seeks talented individuals to work in DNA probe technology, immunodiagnostics and vaccines.

Qualified candidates will have a Ph.D in molecular biology, immunology, cell biology or chemistry and at least 2 years post doctoral experience. A strong orientation towards biotechnology is desired.

We offer a dynamic working environment with competitive salary and benefits.

Send CV to: **John Landes, ImClone Systems, 180 Varick St., New York, New York 10014.**



**ImClone Systems Incorporated**

# PROTEIN CHEMISTS / JAPAN

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Count on making a contribution  
to fast expanding programs in basic research

Hoechst, one of the world's largest pharmaceutical companies, is presently seeking highly motivated and creative Scientists to work in the Department of Basic Research at our Japanese Research Institute. Rapid expansion of basic research is envisaged. The research areas include immunology, molecular biology, synthetic biology and microbial chemistry. The laboratories are modern, well-equipped and located in a pleasant suburb of Tokyo. An independent and open research environment prevails. Publication and interaction with other scientists throughout the world are actively encouraged.

Candidates for this position must:

- be able to communicate in Japanese with ease
- be capable of carrying out independent bench research
- possess a PhD or MD
- have state-of-the-art knowledge and experience in the field of purification and characterization of recombinant proteins

Candidates are invited to send their CV including details of publications to: **Dr. Elmar Konz, Head of R&D Laboratories, Hoechst Japan Limited, 1-3-2 Minami-dai, Kawagoe-shi, Saitama 350, Japan (0492-43-6110).**

**Hoechst**



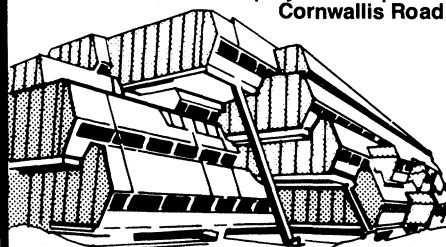
# ENZYMOLGY RESEARCH

BURROUGHS WELLCOME CO., a producer of high quality pharmaceuticals and having a top reputation for innovative research, has two immediate openings available for Research Scientists in the Experimental Therapy Department to study the mechanisms of action of antiviral compounds.

The candidates should have a sense of curiosity and professionalism to share the planning and execution of studies in a research program that includes investigations into the enzymatic basis for biological activities of potential drugs, the mechanisms of enzyme activities and the identification of biologically active compounds. Recent studies in this laboratory have been involved with enzymatic aspects of the mechanisms of the antiviral compounds, acyclovir and azidothymidine. Experience in nucleic acid metabolism or molecular genetics is desirable for either position, (mentor: J.A. Fyfe).

The position of Research Enzymologist requires a Ph.D. degree or equivalent in biochemistry, pharmacology or molecular biology and demonstrated achievement in enzymology. The Associate Research Enzymologist position requires an M.S. degree in biochemistry, chemistry or biology (with a good understanding of chemistry through organic chemistry), or equivalent, and a demonstrated interest in enzymology.

BURROUGHS WELLCOME CO. offers a comprehensive company-paid benefit package and a challenging and pleasant environment in which to exercise your professional capabilities. To apply, forward your curriculum vitae, indicating position of interest to: **Employment Supervisor, BURROUGHS WELLCOME CO., 3030 Cornwallis Road, Research Triangle Park, NC 27709.**



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WELLCOME CO.**



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## POSITIONS OPEN

### PETROLOGIST

Tenure-track teaching position beginning August 1987 at **ASSISTANT PROFESSOR** rank. Completed Ph.D. required. Teaching capability in mineralogy and petrology, and one or more of the following: geologic mapping and air photo interpretation, structural geology, economic geology, or geochemistry. Competence in teaching geoscience-report writing desirable, but not necessary. Develop undergraduate and graduate research program in specialty; available equipment includes MAC-5 electron microprobe. Indiana University-Purdue University at Indianapolis (IUPUI) is an urban university that brings together more than 100 degree programs offered by 16 schools and divisions, with more than 23,000 students. About 50 geology majors are in the B.A. or B.S. programs; a new M.S. program has about 6 graduate students. Send résumé by 6 March 1987 to: **Dr. Arthur Mirsky, Chairman, Department of Geology, Indiana University-Purdue University at Indianapolis, 425 Agnes Street, Indianapolis, IN 46202.** *Affirmative Action/Equal Opportunity Employer.*

### PHARMACOLOGIST—ENZYMOLOGIST

For studies in cytochrome P-450, **Laboratory of Molecular Carcinogenesis, National Cancer Institute, National Institutes of Health, Public Health Service.** A senior staff fellow position is available for a scientist to study the enzymology and pharmacology of cytochromes P-450 in a laboratory currently using both monoclonal antibodies and molecular biology approaches to understand cytochrome P-450 multiplicity, structure, and function. Salary range: \$20,688 to \$41,358. Send curriculum vitae and three letters of reference to: **Dr. Harry V. Gelboin, Chief, Laboratory of Molecular Carcinogenesis, National Cancer Institute, National Institutes of Health, 9000 Rockville Pike, 37/3E24, Bethesda, MD 20892.** *An Equal Opportunity Employer.*

### PLANT PHYSIOLOGIST

**Department of Botany and Plant Sciences, University of California, Riverside,** announces a position, available 1 July 1987. The position is to be filled at the **ASSISTANT, ASSOCIATE, OR FULL PROFESSOR** level. Eleven-month, tenure-track appointment in the College of Natural and Agricultural Sciences and in the Agricultural Experiment Station. Ph.D. required. The successful candidate will be expected to develop a vigorous, innovative, independent research program. Experience will determine the rank and level of the position. Research commitment to the study of the regulation of photosynthate allocation at the molecular/biochemical level with emphasis on the study of oil and/or natural product deposition and accumulation in crop or potential crop plants. Must contribute to the departmental undergraduate teaching program and participate in teaching an upper division/graduate course in plant physiology.

Send curriculum vitae and arrange to have at least three letters of recommendation sent to: **Dr. Irwin P. Ting, Chairman, Department of Botany and Plant Sciences, University of California, Riverside, CA 92521.** Application deadline is 1 April 1987, or later if suitable candidates have not been selected.

*The University of California, Riverside is an Affirmative Action/Equal Opportunity Employer. Minorities and women are especially encouraged to apply.*

### POSTDOCTORAL POSITION IN MARINE AND ESTUARINE SCIENCES

The **University of Maryland Center for Environmental and Estuarine Studies (UMCEES), Horn Point Environmental Laboratories, located on Chesapeake Bay,** is seeking to fill a postdoctoral position in any one of a broad spectrum of disciplines. These include coastal geology; invertebrate behavior, development, ecology, and physiology; nutrient cycling and productivity of phytoplankton, zooplankton, and vascular plant communities; physical oceanography; and seafood technology. The position is available from 1 October 1987, for 1 year with possible renewal for a maximum of 2 years. Send résumé and three letters of reference by 30 April 1987 to: **Dr. W. Michael Kemp, Chairman, Postdoctoral Search Committee, Horn Point Environmental Laboratories, P.O. Box 775, Cambridge, MD 21613.** *The University of Maryland is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**PHYSICAL SCIENCES:** Teach chemistry, physics, and other physical science courses, for example, geology, astronomy. Assist in developing new natural science major. Must substantiate successful teaching experience. Master's required. Rank and salary commensurate with degree and experience. Begin August 1987. Three-year appointment, perhaps becoming permanent. Applications by 3 April 1987. Résumé, transcripts, three letters of recommendation to: **Reverend Jeremy King, O.S.B., Chairman of Sciences and Religion, Saint Meinrad College, St. Meinrad, IN 47577-1022.** *Affirmative Action/Equal Opportunity Employer.*

**PHYSIOLOGIST, CARDIOVASCULAR,** needed to fill a tenure-track assistant professorship. Teaching proficiency essential. Send inquiries and applications to: **D. F. Magee, Creighton University Medical School, Omaha, NE 68178.**

### POSTDOCTORAL FELLOW CARDIOVASCULAR BIOCHEMISTRY

Schering-Plough offers a biochemist or pharmacologist opportunity to participate in an active research program in cardiovascular pharmacology aimed at understanding blood pressure regulation at the molecular level. Opening is in the Department of Pharmacology Section of Cardiovascular Biochemistry, located in Bloomfield, NJ. The selected candidate will study enzymes involved in degradation of vasoactive peptides. The position requires skill in HPLC separation of proteins and peptides, and familiarity with protein isolation techniques. To explore, send curriculum vitae to: **Louis DeMartino, Box TM86-45, Schering Research, 60 Orange Street, Bloomfield, NJ 07003.** *We are an Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available immediately to study regulation of sporulation and solventogenesis in clostridia. Ph.D. in microbiology or biochemistry and experience in protein purification/gel electrophoresis/enzymology/bacterial physiology desirable. Please send curriculum vitae and names of three references to: **Dr. E. R. Keshket, Department of Microbiology, Boston University School of Medicine, 80 East Concord Street, Boston, MA 02118.** *Equal Opportunity Employment, M/F.*

## POSITIONS OPEN

**POSTDOCTORAL ASSISTANT** for university located in southwestern Ohio to conduct research designing and developing new synthetic routes for inorganic radiopharmaceuticals, that is, technetium and rhenium diphosphonates which are in use or proposed to solve diagnostic and therapeutic medical problems, that is, heart attack, stroke, and cancer; characterization of these radiopharmaceuticals by EXAFS (extended x-ray absorption fine structure), WAXS (wide angle x-ray scattering) and DAS (differential anomalous scattering) using Synchrotron x-ray radiation and computer calculations. Requires Ph.D. in chemistry with specialization in inorganic chemistry and 1 year of experience in the field of x-ray structure analysis, computer and inorganic synthesis. Forty hours per week; \$16,000 per year. Qualified applicants reply immediately with résumé to: **R. Lechler, JO #0685948, Ohio Bureau Employment Services, P.O. Box 1618, Columbus, OH 43216.**

**POSTDOCTORAL POSITION** available immediately in oral biology laboratory studying structure/function relationships of salivary proteins, with special focus on protein-mineral interactions. Candidates should have a Ph.D. or equivalent. Experience and training in protein chemistry (purification, physical characterization) and molecular biology are preferred. Send curriculum vitae and names of two references to: **Professor Frank Oppenheim, Departments of Oral Biology and Biochemistry, Boston University Medical Center, Boston, MA 02118.**

**POSTDOCTORAL POSITION:** Molecular evolutionary studies of amphibian origins. Includes sequencing of ribosomal genes and MC/F analyses of albumin evolution. One-year appointment from 1 June 1987. To assure full consideration, application materials must be received by 24 March 1987. Send full curriculum vitae and names and telephone numbers of three references to: **Dr. Linda Maxson, Department of Ecology, Ethology, and Evolution, 515 Morrill Hall, 505 South Goodwin Avenue, Urbana, IL 61801.** *University of Illinois, Urbana Campus, is an Affirmative Action/Equal Opportunity Employer.*

# ACCELERATOR PHYSICIST

The Engineering Division of Argonne National Laboratory offers interesting challenges in applied accelerator research and development. As a member of the staff you will have an opportunity to contribute to experimental research in high-current particle beam system development in support of national defense.

You will collaborate with a team of Ph.D.-level engineers and physicists within the Test Physics Group. Your knowledge of particle accelerators and the development of ion sources will be fully utilized in a broad scope of research activities that include: radiation yields from neutral particle bombardment, neutral beam direction sensing, neutralization of negatively-charged beams, particle and photon sensors, beam magnetic optics. Credentials must include a Ph.D. or equivalent in Physics or Engineering Physics; considerable skills in computer use for data reduction, analysis and physics modeling; exceptional communications skills; and directly related experience. Requires either a Q clearance or immediate eligibility.

**We also invite qualified physicists to explore a role in other aspects of this exciting venture.**



If you're responsive to an innovative environment where individual judgment and contributions are valued, send resume to **Walter McFall, Box D-27740-55, Argonne National Laboratory, 9700 South Cass Avenue, Argonne, IL 60439.**

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U.S. citizenship required.

## BS/MS SCIENTISTS

ELI LILLY AND COMPANY is seeking applicants for two positions in the Biochemical Development Division.

### BS/MS Molecular Biologist

This position requires a Bachelors degree with at least two years experience or a Masters degree in Molecular Biology. Applicants must be familiar with techniques used in molecular cloning, such as plasmid preparation, restriction mapping and southern blotting.

### BS/MS Enzymologist/Protein Chemist

This position requires a Bachelors/Masters degree with extensive experience in protein/enzyme purification and characterization. HPLC, gel electrophoresis and column chromatography skills are essential. In-depth understanding in elucidation of structure-function relationship of enzymes is highly desirable.

Qualified candidates for both positions should send their resume to:



Terri L. Cramer (AMB)  
Eli Lilly and Company  
Lilly Corporate Center  
Indianapolis, Indiana 46285

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## DIRECTOR

### The Jackson Laboratory Bar Harbor, Maine

The Jackson Laboratory, an internationally recognized mammalian genetics research institution, is seeking a Director, effective January 1, 1988. Interested persons should have an outstanding record in biological research and demonstrated competence in administration. Designated a Laboratory Cancer Research Center by NCI, the Jackson Laboratory has a research staff of 37, 500 employees and a budget of over \$20 million. Reply to...

Kenneth P. Trevett, Executive Secretary  
Director's Search Committee  
The Jackson Laboratory  
600 Main Street  
Bar Harbor, ME 04609-0800

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IMMUNOPATHOLOGY**

Our growing preclinical investigations group seeks individuals with training and experience in in vivo and in vitro aspects of anticancer therapeutics. Responsibilities include participation in ongoing evaluation of new biotechnology-based health care products, and development of an appropriate research program. Candidates should have 2-5 years' post-doctoral experience in a relevant field, and documented evidence of innovative research accomplishments.

Please send your resume in confidence to:

**CETUS CORPORATION**  
Box WKS  
1400 Fifty-third Street  
Emeryville, CA 94608

E/O/E



## POSITIONS OPEN

**POSTDOCTORAL POSITION**—A postdoctoral position is available immediately for an individual with an interest and strong background in phospholipid biochemistry. GC-MS experience is desirable. State-of-the-art methodology will be employed to investigate mechanism of leukotriene and PAF biosynthesis and pathogenesis. Please send curriculum vitae to: **Maureen Quigley, Professional Employment Representative, American Cyanamid Company, Lederle Laboratories, Pearl River, NY 10965. An Equal Employment Opportunity Employer.**

**The Beckman Laser Institute and Medical Clinic, University of California, Irvine,** is seeking to fill four postdoctoral (Ph.D. or M.D./Ph.D.) positions.

- (i) **Photochemist:** To work in the area of photosensitization cells and tumors; expertise in both photochemistry and tumor biology desired.
- (ii) **Spectroscopist/Biophysicist:** To work on cellular and subcellular laser-excited spectroscopy; knowledge of fast spectroscopy and Raman spectroscopy is desired.
- (iii) **Cell Biologist/Geneticist:** To study gene insertion/deletion in plant and animal cells by laser microscopy as well as other problems of cell organelle function.
- (iv) **Biophysicist/Applied Physics—Optics:** To study problems of laser tissue interactions as well as methods of laser delivery and dosimetry.

Please reply to: **Michael W. Berns, Ph.D., Beckman Laser Institute and Medical Clinic, University of California, Irvine, 1002 Health Sciences Road East, Irvine, CA 92715. The University of California, Irvine is an Equal Opportunity/Affirmative Action Employer.**

## POSTDOCTORAL POSITION

Available May 1987 to study the molecular bases of the selectivity of pirenzepine for muscarinic receptor subtypes. The proposed studies include radioligand binding, receptor solubilization and tissue culture techniques, in addition to assays of cyclic nucleotide and phosphoinositide levels. Send resume and three reference letters to:

**Dr. Esam E. El-Fakahany  
Department of Pharmacology and Toxicology  
University of Maryland School of Pharmacy  
Baltimore, MD 21201**

*An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL RESEARCH ASSOCIATE IN REPRODUCTIVE MOLECULAR BIOLOGY.** Position available immediately to study regulation of somatic and spermatogenic cell-specific histone genes during spermatogenesis. The factors and DNA sequences involved in the cell-specific transcription of the histone genes will be investigated by using recombinant DNA techniques, cell culture, gene transfer, in situ cytohybridization, and immunocytology. Send curriculum vitae with the names of three references to: **Dr. Chi-Bom Chae, Department of Biochemistry, University of North Carolina, Chapel Hill, NC 27514. Equal Opportunity/Affirmative Action Employer.**

**TWO POSTDOCTORAL POSITIONS** available immediately for two recent Ph.D.'s with strong background in molecular biology, recombinant DNA studies, and/or biochemistry. Research will involve studies on regulation, activation, expression and structure of cellular and viral oncogenes and their products in mammary cells. Related areas of research include in vivo/in vitro investigations into the mechanism by which nutrients modulate mammary tumorigenesis and mammary tumor metastasis. Technical help is available. Successful candidates will be encouraged to develop independent programs. Position could lead to a non tenure track faculty position within 12 months. Salary is negotiable. Please send curriculum vitae and names of three references to: **Dr. Nurul H. Sarkar, Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, GA 30912-3331. An Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately to study structure-function relationships in isozymes of human aldehyde dehydrogenase. Experience in amino acid sequence analysis desirable but not essential. Ph.D. in biochemistry with interest in chemistry required. Send curriculum vitae and names of three references to: **Dr. Regina Pietruszko, Center of Alcohol Studies, Rutgers University, Piscataway, NJ 08854. An Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** now available in biochemistry. We are an established group in the area of membrane structure and function, magnetic resonance spectroscopy and biophysics, with interests in signal transduction, protein kinases, phospholipase c, and molecular basis of tumor promotion. We are looking for a colleague with mutual interests and a strong background in biochemistry. Cloning experience helpful. Send curriculum vitae and names and addresses of three references to: **Dr. O. Hayes Griffith, Institute of Molecular Biology, University of Oregon, Eugene, OR 97403 by 15 March 1987. Telephone: 503-686-4634. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION**—A postdoctoral fellowship is available immediately to study the regulation of phosphatidylinositol metabolism in yeast. This research involves the purification and characterization of membrane-associated enzymes, reconstitution of enzymes into liposomes, preparation of antibodies and immunoblotting, isolation of mutants, and cloning of structural and regulatory genes. Salary range is \$18,000 to \$22,000 depending on experience. Please send a curriculum vitae, copies of relevant reprints, and arrange to have two letters of recommendation sent to: **Dr. George M. Carman, Department of Food Science, Rutgers University, New Brunswick, NJ 08903. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION:** available immediately to study regulation of extracellular matrix degradation in tumorigenesis. Projects involve recombinant DNA methods to examine the expression of tumor cell surface proteins, monoclonal antibody preparation and its use for purification of heparan sulfate-binding proteins from tumor cells. Background in molecular biology, cell biology, or biochemistry is preferred. Send curriculum vitae and names of references to: **Dr. C. Biswas, Department of Anatomy and Cell Biology; Tufts Medical School; 136 Harrison Avenue, Boston, MA 02111.**

**POSTDOCTORAL POSITION** available immediately to investigate control of peripheral vascular function and sex differences in vascular physiology in humans. Ph.D. or M.D. with experience in cardiovascular physiology or pharmacology. Please send curriculum vitae, reprints, and names of three references to: **Robert Freedman, Ph.D., Director, Behavioral Medicine Laboratory, Wayne State University, School of Medicine, Lafayette Clinic, 951 East Lafayette, Detroit, MI 48207.**

**POSTDOCTORAL POSITION IN CARCINOGENESIS/GENETIC TOXICOLOGY** available March 1987 for Ph.D. with experience in one of the following areas: biochemistry, analytical chemistry, drug metabolism, or chemical carcinogenesis. Candidate will study molecular mechanisms of chemical carcinogenesis and participate in development of analytical methods for DNA damage. Send résumé, reprints if available, and reference letters to: **Dr. K. Randerath, Department of Pharmacology, Baylor College of Medicine, Houston, TX 77030. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION IN MACROPHAGE BIOLOGY:** To study molecular role of ligand-receptor interactions of murine complement proteins and IgG isotypes related to macrophage effector functions. New Ph.D. or 1 to 2 years of postdoctoral experience. Experience both in protein biochemistry and cellular immunology desirable. Private internally funded research foundation; possible permanent positions. Send curriculum vitae and research résumé to: **Richard W. Leu, Ph.D., Immunology Section, Biomedical Division, The Samuel Roberts Noble Foundation, P.O. Box 2180, Ardmore, OK 73402.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION, FUNGAL MOLECULAR GENETICS:** available 1987, to clone and characterize developmental genes regulated by mating-type genes in the higher fungus, *Schizophyllum*. Genes, known for function during sexual development, will be isolated via DNA-transformation and compared for sequence, product, and regulation of expression. Send letter, curriculum vitae and names of evaluators to: **Dr. Carlene Raper, Department of Microbiology, University of Vermont, Burlington, VT 05405.**

## POSTDOCTORAL POSITIONS ENZYMOLOGY AND PROTEIN CHEMISTRY

Positions available immediately for individuals with Ph.D.s in biochemistry, molecular biology, or related areas to study two control enzymes of glucose metabolism.

**Phosphorylase Kinase (Skeletal Muscle)**—Subunit interactions, recognition sites, architecture, reconstitution, structures and roles.

**Phosphoenolpyruvate Carboxykinase (Liver)**—Active site mapping (GTP and divalent metal binding sites and identification of critical Cys) and catalytic fragments.

Newly remodeled, fully equipped laboratories and competitive salaries. Please send curriculum vitae and names and telephone numbers of three references to: **Dr. Gerald M. Carlson, Department of Biochemistry, University of Tennessee, Memphis, The Health Science Center, 800 Madison Avenue, Memphis, TN 38163.**

*The University of Tennessee is an Equal Opportunity Employer.*

**POSTDOCTORAL RESEARCH ASSOCIATE.** Position available to do research on the molecular basis of photoadaptation in eukaryotic algae, as part of a collaborative effort between the Department of Applied Science and the Biology Department at Brookhaven National Laboratory. Candidates must hold a recent doctorate in plant or algal biochemistry, or physiology. A background in molecular biology is highly desirable. Send curriculum vitae and names of three references to: **Dr. P. G. Falkowski, Department of Applied Science, Building 318, Brookhaven National Laboratory, Associated Universities, Incorporated, Upton, Long Island, NY 11973. Equal Opportunity Employer M/F.**

**POSTDOCTORAL POSITION** available to study molecular genetics of human papillomaviruses. Applicants should have experience in molecular biology, cell biology, or monoclonal antibody production to participate in research on structure and function of the viral genome to determine mechanism of cell transformation. Send curriculum vitae, summary of research experience and names of three references to: **Dr. Phoebe Mounts, Department of Immunology and Infectious Diseases, Johns Hopkins University School of Public Health, 615 North Wolfe Street, Baltimore, MD 21205.**

## POSTDOCTORAL/RESEARCH ASSOCIATE

Position available immediately to study gene expression in Alzheimer's disease. Candidates must have a background in molecular genetics and skill in recombinant DNA techniques. Please send curriculum vitae and two references to:

**D. R. McLachlan  
Department of Physiology  
Medical Sciences Building  
Room 3318  
University of Toronto  
Toronto, Ontario  
Canada M5S 1A8**

**POSTDOCTORATE 2-D NMR**—To solve the solution structure of small (MW 6,000–10,000) proteins involved in blood coagulation phenomena. Facilities include Bruker 500, MSL 300, several 200, 300 MHz. Candidate should have experience in NMR of macromolecules. Available 1 March 1987. Please submit curriculum vitae, reprints, and three to four references to: **Professor L. J. Berliner, Department of Chemistry, Ohio State University, 120 West 18 Avenue, Columbus, OH 43210; telephone: 614-292-0134.**



## CELL SORTER OPERATOR

Cetus Corporation, a leader in the research and development of biotechnology-based therapeutics, seeks an experienced cell sorter operator to run a BD-FACS II system cell sorter. The successful candidate will have extensive cell sorting experience, preferably on the BD-FACS II system. Responsibilities include cell sorting and phenotyping in a research setting. Candidates must have demonstrated ability to perform independent and creative research, as well as collaborate effectively with other research staff.

Please send your resume in confidence to:

**CETUS CORPORATION**  
Box DCS  
1400 Fifty-third Street  
Emeryville, CA 94608

E/O/E



## COMPUTATIONAL CHEMIST (PhD)

Applications Group  
Molecular Systems Dept.

Merck Sharp & Dohme Research Laboratories, a worldwide leader in pharmaceutical research, seeks an individual with extensive knowledge of organic chemistry, in addition to experience with the methods of computational chemistry, to work closely with both the members of the Molecular Systems Department and laboratory scientists. The molecular systems team, supported by excellent graphic and computational facilities, is a multidisciplinary group of ten Ph.D. scientists involved in studies covering a wide area of chemistry and biochemistry. Specialized research areas include:

1. Protein and peptide structure and function, including energy minimization and molecular dynamics on macromolecules.
2. Small molecule structure, including methods for construction, energy minimization and conformational analysis by both empirical and molecular orbital methods. Experience with small molecule docking into protein active sites would be helpful as would development of new computational methods and programming, especially in FORTRAN.

If you are an innovative, people-oriented professional, this may be your opportunity to join our exceptional organization. Submit your curriculum vitae and salary requirements to **Susan R. Jenkins, WP 42-2, Merck & Co., Inc., Summerville Pike, West Point, PA 19486**. An Equal Opportunity Employer M/F.



**Merck & Co., Inc.**

# MOLECULAR GENETICS RESEARCH

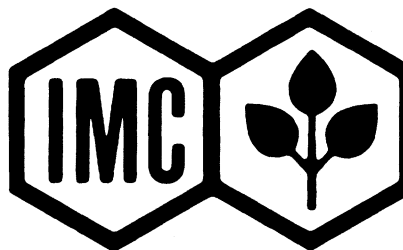
International Minerals & Chemical Corporation, a diversified Fortune 200 company, is among the world's leading producers of nutrients for crops and products for animal agriculture. Through Mallinckrodt, a wholly-owned subsidiary, the company is a major supplier of specialty chemicals, medical products, and flavors & fragrances.

We are presently seeking a research molecular geneticist who has demonstrated a capacity for extensive problem-solving through individual creativity and original thinking. This position will be located in our corporate research laboratories in Northbrook, Illinois, a northwest suburb of Chicago.

The individual we seek will be responsible for planning, conducting and evaluating basic and applied research and product development projects of a complex nature. The successful candidate will have a Ph.D. in molecular biology, molecular genetics, or a related field and a minimum of 2 years of post-doctoral research experience.

Candidates for this position must have training and experience in cloning and expression of heterologous genes in eukaryotic systems, vector design and construction, site-directed mutagenesis, and DNA sequencing. Strong oral and written communications skills are essential.

If you have demonstrated professional expertise in the area of molecular genetics and would like to become a part of an expanding research effort with a growth-oriented company, IMC can offer you a competitive salary, excellent benefits and a dynamic research work environment. We invite you to reply in confidence to: **International Minerals & Chemical Corporation, Attn: Mr. James E. Moore, P.O. Box 207, Terre Haute, IN 47808-0207**. All applicants must be prepared to document authorization to work in the U.S.



**International Minerals & Chemical Corporation**

An Equal Opportunity Employer

## POSITIONS OPEN

**POSTDOCTORAL RESEARCH ASSOCIATES, PHYSICAL CHEMISTRY OR CHEMICAL PHYSICS.** Two positions available immediately for recent Ph.D.'s in physical chemistry or chemical physics to work in areas of gas-phase molecular dynamics, spectroscopy and photoionization. Some areas of current research include: (i) high-resolution infrared spectroscopy of chemical intermediates produced by pulsed discharge or UV laser photolysis; (ii) photoionization dynamics of resonantly excited molecules by photoelectron and ion mass spectroscopies; (iii) state-resolved reaction dynamics using laser or synchrotron radiation probes. Extensive experimental facilities are available including excimer and Nd:YAG pumped dye-laser systems, photoelectron, and ion spectrometers; and VUV beam lines located at the National Synchrotron Light Source (NSLS). Candidates should send résumé and three letters of recommendation to: **Dr. Alfred P. Wolf, Chairman, Chemistry Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, NY 11973.** *Equal Opportunity Employer M/F.*

**PROFESSOR AND CHAIR, Department of Food Science and Technology, University of California at Davis,** available 1 July 1987, to furnish leadership in administration and in teaching, advising, research, and extension activities of the Department. Applicants must hold the Ph.D. or equivalent degree in an appropriate discipline and have a record of research accomplishment commensurate with a professorial appointment, and have demonstrated scholarly achievements. Experience in fiscal management desirable; skill in communicating with government, industry, and academic groups necessary. Applicants should submit curriculum vitae, a list of publications, and representative reprints of pertinent scientific publications, a résumé detailing research and teaching accomplishments and administrative experience, and the names and addresses of at least four references to: **Professor Tom Richardson, Search Committee Chairman, Department of Food Science and Technology, University of California, Davis, CA 95616.** Applications should be received by 15 May 1987. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**POSTDOCTORAL RESEARCH ASSOCIATE.** Recent Ph.D. to join ongoing research program utilizing flow cytometry and biochemical techniques to characterize mammalian sperm cells as related to fertility and possible damage induced by environmental factors. [See *Cytometry* 6, 238 (1985); *J. Anim. Sci.* 63, 995 (1986).] Background in reproductive biology, flow cytometry, genetics, animal science, toxicology, and statistics helpful. USDA grant funds available for 2 years. Salary \$20,000 to \$22,000 plus benefits. Send curriculum vitae with names, addresses, and phone numbers of three references. Application deadline: 15 April 1987 or until position is filled. **Dr. D. P. Evenson, Department of Chemistry, Box 2170, South Dakota State University (SDSU), Brookings, SD 57007.** *SDSU is an Equal Opportunity Employer.*

### POSTDOCTORAL SCIENTIST

An excellent research opportunity exists for a research scientist experienced in the use of mammalian expression vectors and preparation and screening of cDNA libraries. Duties will also include cloning hormone receptor genes for site-directed mutagenesis studies. You will have an excellent opportunity to carry out meaningful research and publish. Excellent salary and benefits programs accompany this position at our modern research laboratories located in suburban Philadelphia. Please send résumé to: **Research Personnel W42-2, Merck Sharp and Dohme Research Laboratories, West Point, PA 19486.** *Equal Opportunity Employment/Affirmative Action/VH/Employee.*

**RESEARCH ASSISTANT PROFESSOR, Ph.D.** to join a leading team of clinicians and scientists at a major university. Applicants with an active interest in basic research on the genetic analysis of the seronegative spondyloarthropathies are encouraged to apply. Curriculum vitae should be sent to: **William J. Koopman, M.D., Professor of Medicine, Director, Division of Clinical Immunology and Rheumatology, The University of Alabama at Birmingham, Birmingham, AL 35294, before 1 March 1987.** *The University of Alabama at Birmingham is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

Professor to Instructor level (tenure-track positions) in dynamic department with programs in molecular biology, chemical and viral carcinogenesis, cardiovascular research in lipid metabolism and myocarditis, epidemiology of leukemia and lymphoma, bone marrow and liver transplantation, tumor biology, computer modeling, immunodeficiency, virology, and cell biology (\$2 million per year grant support). Positions available 1 July 1987 at all academic ranks including **MOLECULAR BIOLOGISTS** with funded programs in lymphotropic viruses or other oncogenic viruses; **IMMUNOLOGISTS** with cellular or molecular expertise; **CLINICAL PATHOLOGIST** with expertise in flow cytometry, tissue typing, or immune function studies; **PULMONARY PATHOLOGIST** to develop a new program bridging Omaha V.A. and University Hospital; and **IMMUNOPATHOLOGIST/SURGICAL PATHOLOGIST** for Omaha V.A. and University Hospital. Molecular geneticists, epidemiologists/biostatisticians, and molecular biologists using transgenic mice are encouraged to apply. Ph.D., M.D., or M.D./Ph.D. with Board qualifications or certification. Candidates must show evidence of academic achievement and potential. Please send curriculum vitae and three references to: **David T. Putilo, M.D., Chairman, Pathology and Microbiology, University of Nebraska Medical Center, 42 and Dewey Avenue, Omaha, NE 68105.** *An Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.*

**RESEARCH ASSOCIATE: The Medical College of Virginia** is seeking a research assistant/associate for the Division of Substance Abuse Medicine. Candidate should have extensive background in clinical research in substance abuse, experience in grants management and ability to carry out independent research. Joint appointment with Department of Pharmacology possible. Send curriculum vitae to: **Sidney Schnoll, M.D., Director of Substance Abuse Program, Box 663, MCV Station, Richmond, VA 23298-0001.** *Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

# Join An Emerging Leader in DNA PROBE DIAGNOSTICS

The GIBCO/BRL Division of Life Technologies, Inc. is expanding its program to develop important new clinical diagnostic products based on nucleic acid detection.

*We are seeking:*

### **SENIOR MOLECULAR BIOLOGIST — Ph.D.**

- Contribute your creativity to a leading-edge research program.
- Work within a team of experienced and innovative scientists.

### **EXPERIENCED DIAGNOSTIC MARKETING PROFESSIONAL**

- Pursue an opportunity to introduce an exciting new technology.
- Assume full responsibility for planning and launching major new products.

### **FDA SUBMISSIONS AND CLINICAL TRIALS ADMINISTRATOR**

- Develop the regulatory procedures required for FDA approval.
- Build on our strong record of regulatory excellence.

We are a successful biotechnology company with a strong reputation in the industry. The leadership enjoyed by our GIBCO and BRL products in molecular and cell biology is evidence of our commitment to excellence.

Our salary and benefits program is highly competitive. Our location combines the scenic countryside of Maryland with the cultural vitality of Washington, D.C.

Candidates should send resume, including salary history, to:

Mr. Richard L. Hotaling, Jr., *Personnel Manager*  
GIBCO/BRL Division, Life Technologies, Inc.  
8717 Grovemont Circle, Gaithersburg, MD 20877

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An equal opportunity employer. M/F/H/V

## Scientists

Biogen Research Corp. is expanding its research laboratories in Cambridge, Massachusetts, and has positions open for Scientists trained in the areas of Molecular Biology, Protein Chemistry, Peptide Chemistry and Cell Biology/Immunology.

Interested applicants should have a Ph.D. and at least two years of post-doctoral experience.

Candidates for the Chemistry position should have specialization in synthesis, purification and analysis of biologically active peptides. The successful candidate will have a strong background in synthetic organic chemistry and a minimum of two years of experience in automated, as well as manual, synthesis of peptides, HPLC purification and analysis.

Applicants for the Cell Biology/Immunology position should have training in any of the following areas: immunochemistry, assay development and antibody production, regulation of immune and inflammatory responses, animal model systems for tumor growth or inflammation.

Candidates for the Protein Chemistry position should have experience in protein purification, protein structural chemistry, enzymology or the study of glycoprotein chemistry.

Molecular Biology candidates should have experience in any of the following areas: molecular biology-based studies of inflammation; isolation and analysis of differentially expressed genes from animal and cellular systems, expression of foreign proteins from yeast.

CV's should include a list of publications and three professional references.

Biogen offers an excellent compensation and benefits package. Please forward your CV to the **Manager of Human Resources, Biogen, Dept. S-2/1, 14 Cambridge Center, Cambridge, MA 02142.** An equal opportunity employer.

# BIOGEN

*CREATIVE BIOMOLECULES, INC. is a leader in the development of products for soft and hard tissue repair. Our research is focused on the development and application of recombinant DNA technology to human health care. We are currently expanding our research and development efforts and have the following openings:*

## PROJECT MANAGERS

Project Managers will be actively involved in planning and coordinating projects covering our recombinant products developed for pharmaceutical therapeutic use. Responsibilities will include the integration of science, business, production and general administrative concerns. The successful candidate will plan meetings, prepare activity plans and budgets, facilitate internal discussion of project issues and serve as the contact point for development partner relations. This position demands strong interpersonal and management skills plus the ability to problem solve and integrate various functions. The applicant's background should include a Ph.D. in a related scientific discipline and several years of proven management experience in a high technology environment.

Creative BioMolecules offers competitive salaries and health benefits along with the opportunity to make a significant contribution to the success of the Company. Please send resume to: **Personnel Department, Creative BioMolecules, 35 South Street, Hopkinton, MA 01748**



## CREATIVE BIOMOLECULES

Equal Opportunity Employer

## RESEARCH BIOLOGISTS

Wyeth Laboratories' Radnor facility is a major pharmaceutical company's center for R&D. As part of a major, on-going expansion, we require additional Research Molecular Biologists:

### Molecular Virologist

A position is available in Wyeth's expanding AIDS vaccine program. A Ph.D. in Microbiology, Biochemistry, or Molecular Biology is required with strong post-doctoral experience in molecular virology of animal DNA viruses or retroviruses. The successful candidate should be highly skilled in virology with special emphasis in molecular genetics and recombinant DNA technology.

### Nucleic Acid-Sequencing Biochemist

A position is available for Ph.D. with a strong background in nucleic acid sequencing, oligonucleotide synthesis and gene assembly. Strong post-doctoral work and demonstrated ability are essential.

### Research Immunologist

An Immunologist with expertise in immune responses to viral infections to play a key role in the development and testing of genetically engineered viral vaccines. Candidates should have a Ph.D. with strong post-doctoral experience, and skill in *in vivo* animal models.

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

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

## Wyeth Laboratories



TM

In just eight years Ortho Pharmaceutical Corporation has emerged at the forefront of biotechnology. For specific reasons, our new Biotech Division is a very unique place to work.

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### AN OUTSTANDING RECORD OF ACCOMPLISHMENT

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Our record of success is attracting the attention of scientists around the world. We were the first to introduce monoclonal antibodies for research diagnostic use. And this year, we marketed Orthoclone OKT\*3, the first therapeutic monoclonal antibody to be licensed in America and Europe. In addition, our current work with a synthetic pentapeptide fragment of the thymic hormone, thymopoietin, is leading to a novel therapeutic approach towards regulating the immune system in several important diseases.

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### A MOST REWARDING APPROACH TO RESEARCH

---

Under the leadership of Dr. Gideon Goldstein, our research effort has fostered an outstanding and very unique environment. It's one which combines a rich

**Dr. Gideon Goldstein  
on Ortho Biotech**

*"Probably the most exciting place  
you can work today."*

spirit of scientific inquiry with intense commitment. Some of the finest minds in

biotechnology today are working at Ortho Biotech. And whether you join us with an academic or pharmaceutical industry background, you'll find our approach to be exciting and rewarding.

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### THE BACKING OF JOHNSON & JOHNSON

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Our research thrives on entrepreneurial freedom, but our financial foundation is rock solid corporate. As a part of Ortho Pharmaceutical, Ortho Biotech is a Johnson & Johnson Company. As you would expect, we benefit a great deal from their significant and supportive resources.

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### WE'RE GROWING—AND WE WANT THE RIGHT PEOPLE TO GROW WITH US

---

Rapid expansion has created a number of important openings on our research staff.

#### RESEARCH MANAGER— MOLECULAR IMMUNOLOGY:

This position calls for a candidate with a Ph.D. or equivalent in Immunology or related field and 5-7 years' experience demonstrating the ability to supervise a staff of 12 scientific personnel in 4 laboratories involved in immunoregulation research and monoclonal antibody generation. Your background must include extensive research in immunoregulation involving *in vitro* human systems and/or animal models.

#### RESEARCH SCIENTIST/ SR. RESEARCH SCIENTIST:

You should have a Ph.D. or equivalent in immunology,

cell biology or related field and 0-2 years' experience for Research Scientist positions. Senior Research positions call for a Ph.D. or equivalent and minimum 2 years' experience. Our current openings are in 4 areas and involve:

- Responsibility for the generation and maintenance of monoclonal seed lots, maintenance of antibody production, cell viability, and stability of hybridomas.
- Performance of experiments examining immunoregulation in human systems *in vitro*. Resources available include novel monoclonal defining lymphocyte subsets, selective immunoregulatory peptides and cell procurement from normal and defined disease groups.
- Development of dosage forms and delivery systems for peptides. Will prepare preclinical and clinical supplies and conduct probe formulation and stability studies.
- Conducting studies to access biological activity of synthetic analogs of immunoregulatory molecules. Will supervise 2 technicians and perform certain administrative activities. Experience desirable in cellular physiology, biochemistry, tissue culture and histochemical studies.

#### RESEARCH ASSOCIATE/ ASSOCIATE SCIENTIST:

You'll need a BA or MS or equivalent in Biology, Biochemistry or Medical Technology, and minimum 2 years' experience for Associate level position. Ability to work with laboratory animals is essential. We now have a variety of openings for those qualified for one of the following:

- Assist in generation and maintenance of monoclonal antibody seed lots; perform *in vitro* functional usage for antibody characterization.
- Extract tissue for peptide assay, iodinate peptides. You must have experience in the use of radioisotopes, raising antibodies in lab animals, bioassay of endocrine peptides. Experience desirable in radioimmunoassay.

- Generate monoclonal antibodies to lymphocytes and other peripheral blood elements, screen and propagate relevant clones, establish functional assays to study cells.

#### RESEARCH ASSISTANT/ RESEARCH ASSOCIATE:

You'll need a BS or MS or equivalent in Chemistry, Pharmacy, Biological Sciences or related field. Ability to handle, inject and bleed laboratory rodents is essential. Responsibilities involve:

- Assisting in the development of formulations for biological substances, preparing preclinical and clinical supplies and stability studies.
- Generation of monoclonal antibodies to lymphocytes and other peripheral blood elements, screening and propagation of relevant clones, establishing functional assays to study cells reactive with specific antibodies, and maintenance of cell lines in long-term culture.

If you meet the qualifications as listed, write directly to Dr. Gideon Goldstein, Ortho Pharmaceutical Corporation, Biotech Division, Dept. 39, Route 202, Raritan, NJ 08869-0602. Please include a resume and indicate your specific position of interest. We're an equal opportunity employer, m/f/h/v.



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ORTHO  
PHARMACEUTICAL  
CORPORATION**

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## POSITIONS OPEN

**RESEARCH/ASSISTANT PROFESSOR:** The Harvard/Brigham/Children's Division of Plastic Surgery seeks individual with Ph.D. in cell biology or related field. Will be responsible for initiating and carrying out research projects in the field of wound physiology and burns, as well as some administrative responsibilities. A working knowledge of statistics and computer programming is important. Please submit curriculum vitae and references to: **Elof Eriksson, Division of Plastic Surgery, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115.**

**RESEARCH ASSOCIATE** to develop procedures for and carry out the synthesis of substituted polynuclear aromatic hydrocarbons. Carry out the oxidation of such compounds under chemical and enzymatic conditions, determine the products of oxidation, and synthesize those products. Determine the rates of oxidation and other oxidative pathways in various solvents by electrochemistry and spectroscopic kinetic methods. Develop mechanistic hypotheses and provide tests for verifying those hypotheses. Require Ph.D. in physical organic chemistry with 2 years of experience in free radical chemistry, organic synthesis, gas and liquid chromatography and reaction kinetics, with proven record of performance as indicated by publications. Salary: \$20,000 per year. Apply in person with résumé to: **Georgia Department of Labor, 2811 Lakewood Avenue, SW, Atlanta, GA 30315**, or to the nearest Georgia Job Service Center. Control #GA 5193005.

**RESEARCH ASSOCIATE:** Conduct research studies on cardiovascular and renal mechanisms in the pathogenesis of malignant hypertension. Ph.D. or M.D. plus at least 2 years of postdoctoral training in the study of biochemical and physiological mechanisms relevant to the control of blood pressure. Salary \$21,996 per year. Mail résumés to: **Jack Hilzeim, Tennessee Job Service, 1295 Poplar, Memphis, TN 38104. An Equal Opportunity Employer.**

**RESEARCH ASSOCIATE IN MOLECULAR NEUROSCIENCE,** University of Texas Health Science Center at Dallas (UTHSCD), Department of Neurology, invites applications from M.S., Ph.D. or M.D. individuals with comprehensive experience in molecular genetics to pursue: (i) characterization of reiterated DNA sequences and their possible transcriptional products altered during mammalian brain development or oncogenesis of glioma and neuroblastoma and/or (ii) Northern blot analysis of hormonal induction of specific mRNAs in developing neural tissue. Interested applicants should send curriculum vitae and names of three references to: **Dr. Roger N. Rosenberg, Department of Neurology, UTHSCD, 5323 Harry Hines Boulevard, Dallas, TX 75235-9036. UTHSCD is an Equal Opportunity Employer.**

**RESEARCH SCIENTIST—Federal Service.** The Letterman Army Institute of Research, San Francisco, CA is seeking a research physiologist, Ph.D. (or M.D.) level, to participate as a member of a multidisciplinary team investigating the care of the combat casualty. Interest and experience in surgical, shock or wound healing research desirable. Starting salary \$31,619. Send résumé and publications list to: **C. Swift, SGRD-ULZ-RM, Letterman Army Institute of Research, Presidio of San Francisco, CA 94129. An Equal Opportunity Employer.**

**THE INSTITUTE OF BIOMEDICAL SCIENCES, ACADEMIA SINICA, TAIWAN,** is now offering **SENIOR OR JUNIOR SCIENTIST** positions in all areas of basic and clinical sciences, including biochemistry, biophysics, molecular genetics, cell biology, microbiology, immunology, physiology, pharmacology, pathology, and epidemiology. Emphasis will be on those related to cancer, infectious and cardiovascular diseases, as well as neurosciences. Full operation of the Institute starts in 1987 with new building and excellent facilities. There will be close collaboration with the newly established Central Laboratory of Molecular Biology, and an opportunity to work with the Clinical Research Centers in major medical centers in Taipei. Send curriculum vitae and three recommendation letters to: **Dr. Cheng-Wen Wu, Department of Pharmacological Sciences, State University of New York (SUNY) Stony Brook, Stony Brook, NY 11794. SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer. AK #7-B.**

## POSITIONS OPEN

**RESEARCH ASSOCIATE:** to work on the isolation (cosmid cloning) and characterization of naturally occurring mutations in human type I collagen that produce osteogenesis imperfecta. A second project involves development of a system to generate mutations in vitro. The applicant must have a Ph.D. and the demonstrated ability to work independently using the techniques of molecular biology. Salary—approximately \$29,000.

To apply, send résumé to: **Dr. Jeffrey Bonadio, The University of Michigan, 1150 West Medical Center Drive, MSRB I, Room 3530, Ann Arbor, MI 48109.**

**RESEARCH ASSOCIATE, Ph.D.,** to join an ongoing research project on the vestibular system and its motor control functions. Must have appropriate training in neurophysiological and behavioral techniques, and familiarity with contemporary signal processing and analysis. Send curriculum vitae and two letters of reference to: **The Bionetics Corporation, Attention: Libby Varty, M/S 236-5, NASA Ames Research Center, Moffett Field, CA 94305. An Affirmative Action/Equal Opportunity Employer.**

**RESEARCH ENGINEER:** Current projects include high-frequency ventilation, acoustic methods for assessing lung structure, and respiratory mechanics. Primary responsibilities include design, construction and maintenance of equipment used in research studies and maintenance of the Department's computer systems. Qualified applicants should have an M.S. in biomedical or electrical engineering and experience with interfacing instruments with mini- and microcomputers, on-line data acquisition, signal processing. Experience with clinical monitoring instrumentation and numerical methods desirable. Please send résumés to: **Mr. Robert Lewis, University of Connecticut Health Center, Personnel Department, Farmington, CT 06032. An Affirmative Action/Equal Opportunity Employer. M/W/H.**



### STAFF DIRECTOR MATHEMATICAL SCIENCES

**The NATIONAL RESEARCH COUNCIL** seeks a staff director for its Board on Mathematical Sciences. The incumbent will have responsibility for designing, securing funding for, and managing an important program of studies.

A Ph.D. or equivalent in a directly relevant field, 6+ years' relevant experience with administration and/or study project management, extensive working familiarity with research in pure and applied mathematics and statistics, and demonstrated management and communications skills are required.

Please submit a résumé and the names of three references by 1 April 1987 to: **Position #644.001S, National Research Council, 2101 Constitution Avenue, NW, Washington, DC 20418. An Equal Opportunity Employer.**

**STAFF FELLOWS, MEDICAL STAFF FELLOWS, VISITING SCIENTISTS, AND VISITING FELLOWS.** Positions available at the **Addiction Research Center (ARC)** of the **National Institute on Drug Abuse** for recent, as well as experienced, doctoral level graduates in psychology, the neurosciences, pharmacology, and sociology, and for physicians trained in psychiatry or nuclear medicine. The twelve laboratories of the ARC are engaged in a wide range of research on the vulnerability to substance abuse, mechanisms of drug action, and the treatment of drug dependence. The ARC provides significant training opportunities in addition to the capacity to become involved in a body of individual and collaborative study. Research fellows are generally appointed for an initial 2-year period which can be extended. Salaries depend on training and experience. Applicants interested in exploring the opportunities presented by the ARC should write to:

**Jerome H. Jaffe, M.D.**

**Director**

**NIDA Addiction Research Center  
4940 Eastern Avenue  
Baltimore, MD 21224**

## POSITIONS OPEN

**PSYCHOLOGIST, PSYCHIATRIST, OR PHARMACOLOGIST** for position of **CHIEF, LABORATORY OF COGNITIVE STUDIES AND HUMAN PERFORMANCE.** Applicant should have research experience and publications in area of effects of drugs of abuse on human performance and brain activity. Applicant should be familiar with recent developments in neurophysiological assessment of brain function and be interested in collaborations with the laboratories focusing on neuroscience, behavioral and psychopharmacological aspects of drug use and dependence and basis of vulnerability among high risk groups.

Salary will range from \$38,727 to \$53,830, depending on experience and qualifications. Applicants should write to:

**Jerome H. Jaffe, M.D.**

**Director**

**NIDA Addiction Research Center  
4940 Eastern Avenue  
Baltimore, MD 21224**

Include recent curriculum vitae and two references.

### RESEARCH LAB TECHNOLOGISTS MASSACHUSETTS GENERAL HOSPITAL BOSTON, MA

We have many positions open for technologists who have experience in molecular biology, immunology, T-cell culture, as well as transplantation research with experience in standard animal virologic, tissue culture, and immunologic technique. Projects range from DNA manipulation to tumor transplantation to physiology and surgical studies to monoclonal and polyclonal antibody studies. Requires a B.S. in chemistry, biology, or biochemistry with related work experience.

Please send résumé to: **Harold Gregory, Employment Services Office, Massachusetts General Hospital, 15 Fruit Street, Boston, MA 02114** or telephone: 617-726-2205.

*We are an Equal Opportunity/Affirmative Action Employer.*

### TECHNICAL MANAGER (DNA PROBE)

International Company developing new diagnostics business using advanced DNA probe technology seeks practical, problem-solving, hands-on technical manager to direct R&D and Laboratory operations. Ph.D. in molecular genetics, molecular biology plus 3 to 5 years of desirable experience in clinical or genetics testing and use of polymorphic markers. Knowledge of following areas important: gene probe technology, radioisotopes, labeling, electrophoresis, Southern blotting, DNA preparation, cloning, and sequencing. Accredited Laboratory Director and expert witness status beneficial. Must have demonstrable managerial experience, combined with solid interpersonal and communications skills. Assignment requires work with international R&D organization and ability to contribute to worldwide effort. Desirable mid-Atlantic location.

Send résumé or curriculum vitae to: **Robert J. Hartman, P.O. Box 7966, Charlottesville, VA 22906.**

### VICE CHANCELLOR FOR RESEARCH AND DEAN OF THE GRADUATE SCHOOL UNIVERSITY OF ALASKA-FAIRBANKS (UAF)

The Vice Chancellor, under the general guidance of the Chancellor, is responsible for providing overall leadership, coordination, and direction to UAF research and scholarly activities. UAF is the center for organized research within the University of Alaska system. Additionally, the Vice Chancellor has responsibilities for assuring the overall quality of graduate programs in concert with the Graduate Council. Qualifications include a Ph.D. or equivalent, record of scholarly achievement as evidenced by publication record, understanding of basic and applied research, and success in obtaining sponsored research funding. Experience in the management of a research/academic unit is desirable. Send nominations or applications to:

**Dean James W. Drew, Chairman**

**Search Committee**

**303 Signers' Hall**

**University of Alaska-Fairbanks**

**Fairbanks, AK 99775**

**Telephone: 907-474-7188**

Applications should include a letter of application, résumé, and at least three references. Closing date: 31 March 1987. *The University is an Equal Opportunity/Affirmative Action Employer and Educational Institution.*

# **THE FOURTH ANNUAL CONGRESS FOR AUTOMATION, SCALE-UP and the ECONOMICS OF BIOLOGICAL PROCESS ENGINEERING**

**MARCH 4, 1987  
MOSCONE CENTER, SAN FRANCISCO**

A one day meeting in conjunction with:  
THE SEVENTH ANNUAL DNA/HYBRIDOMA CONGRESS EXPOSITION

ORGANIZED BY SCHERAGO ASSOCIATES, INC.  
in conjunction with GENETIC ENGINEERING NEWS

**CHAIRMAN: Gerald L. Hawk, PhD, Zymark Corporation**

## **TOPICS:**

Cell Propagation • Fermentation • Cell Optimization • Cell Characterization • Cell/Tissue Culture • Process Monitoring and Control • Automated Immunoassay • Purification • Biosensors • Human Genome Project • Drug Delivery Systems • Respect to GMP & GLP • Regulation Economic Issues • Automated DNA Sequencing • Automated Plasmid DNA Purification

**Anyone wishing to submit an abstract for presentation may contact Congress Chairman Gerald L. Hawk, PhD, Zymark Corporation, Zymark Center, Hopkinton, MA 01748 (617) 435-9501. (Deadline January 1st).**

S-2-20

Registration Fee: \$250.00

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## POSITIONS OPEN

Massachusetts General Hospital, Boston, MA 02114, seeks RESEARCH TECHNOLOGISTS. We have important positions open for technologists who have experience in molecular biology; immunology and T-cell culture; lymphocyte cytotoxicity; transplantation research requiring experience in standard animal virologic, tissue culture, and radioimmunoassay technique. Projects range from DNA manipulation to tumor transplantation to physiology and surgical studies to monoclonal and polyclonal antibody studies. Requires: B.S. in chemistry, biology or biochemistry with related work experience or science graduate with high G.P.A. will be considered.

Call or send résumé to: Harold Gregory, Employment Services Office, 15 Fruit Street, Boston, MA 02114; telephone: 617-726-2205.

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**ZOOLOGY/COMPARATIVE ANATOMY.** The Department of Biology, Denison University, Granville, Ohio, invites applications for a 2-year replacement position, available September, 1987, at the level of ASSISTANT PROFESSOR OR INSTRUCTOR. Candidates will be expected to teach two courses per semester including general zoology, comparative anatomy/vertebrate zoology and an additional advanced level course. Applicant should have the Ph.D. degree or be working toward the degree. Send résumé, letters of recommendation, and transcripts by 20 March 1987, to: Philip Stukus, Ph.D., Chair, Department of Biology, Denison University, Granville, OH 43023. Denison University is an Affirmative Action/Equal Employment Opportunity Institution.

## PROGRAM

### CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with a doctorate-level degree in science the opportunity to earn the doctor of optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: Dr. D. M. Chauncey, Ph.D.-O.D. Program Director, The New England College of Optometry, 424 Beacon Street, Boston, MA 02115; telephone: 617-266-2030, extension 147.

## TRAINEESHIPS

**PREDOCTORAL AND POSTDOCTORAL TRAINING IN MOLECULAR VIROLOGY.** Several predoctoral and postdoctoral traineeships are available for qualified applicants through NIH training grants. Research areas include: gene cloning, sequence analysis, site-specific modification and expression; viral immunology, vaccine development and membrane biology. Preceptors include: Drs. G. M. Air, L. A. Ball, G. H. Cassell, R. W. Compans, M. D. Cooper, J. Engler, J. A. Griffin, B. H. Hahn, E. Hunter, J. F. Kearney, E. W. Lamon, J. Lebowitz, C. Morrow, P. Roy, J. P. Segrest, G. M. Shaw, R. D. Wells, G. T. Wertz, and R. J. Whitley. Send applications and inquiries to: Dr. R. W. Compans or Dr. E. Hunter, Department of Microbiology, University of Alabama at Birmingham, Birmingham, AL 35294. An Affirmative Action/Equal Opportunity Employer.

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Consider this unique opportunity to add a clinical dimension to your academic career through TRAINING IN PHYSICAL THERAPY. Potential for advanced placement in an entry-level physical therapy program leading to a master's degree. Designed for those with advanced degrees in the basic medical sciences with a desire to combine academic goals with clinical skills. For more information contact:

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## SYMPOSIUM

XIIIth International Symposium for Comparative Research on Leukemia and Related Diseases and Post-Symposium Satellite Workshops.

Symposium: 8 to 13 November 1987, Laromme Hotel, Jerusalem, Israel.

Satellite Symposium: 14 to 17 November 1987, Eilat (Red Sea), Israel.

Contact: Dr. David S. Yohn, Secretary General, Suite 302, 410 West Twelfth Avenue, Columbus, Ohio 43210, or Dr. Ze'ev Trainin, Kimron Veterinary Institute, P.O. Box 12, Beit Dagan 50200, Israel.

## WORKSHOP

**STABLE ISOTOPES AS NATURAL TRACERS OF ECOSYSTEMS PROCESSES.** A 5-day workshop for ecosystem scientists, 17 to 22 May 1987. Lectures on stable isotope theory and applications to nutrient cycling, historical reconstruction, whole ecosystem experiments, and landscape ecology. Laboratories on sample preparation. \$600 registration fee includes room and board. Contact: Brian Fry, Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA 02543; telephone: 617-548-3705. Application deadline 6 March 1987.

## FELLOWSHIPS

### HARVARD UNIVERSITY DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY POSTDOCTORAL FELLOWSHIPS

A limited number of postdoctoral research positions will be available in the upcoming months. Appointments are funded through research grants to faculty members, are for one year, and are renewable. For a list of faculty members who have postdoctoral positions available, write—but please, no résumés or applications at this time—to: Laura Wilson, Department of Biochemistry and Molecular Biology, Harvard University, 7 Divinity Avenue, Cambridge, MA 02138.

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**POSTDOCTORAL FELLOWSHIPS IN INTERDISCIPLINARY RESEARCH IN THE BIOMEDICAL AND BEHAVIORAL SCIENCES.** A training program has been funded to promote interdisciplinary research in mental retardation and developmental neurobiology. Fellows collaborate with research scientists on human/nonhuman research in neuroanatomy, neurochemistry, neuroendocrinology, psychopharmacology, neurology, genetics and behavioral psychology. Available 1 September 1987 for 1 to 2 years. Ph.D. or M.D. plus evidence of interdisciplinary research potential required. Send curriculum vitae, representative reprints and three references to: J. S. Kizer, M.D., 241 Biological Science Research Center, 220H, University of North Carolina, Chapel Hill, NC 27514-7220. Deadline: 15 April 1987.

### POSTDOCTORAL FELLOWSHIPS IN HEMOSTASIS AND CARDIOVASCULAR DISEASE

One- to three-year positions available immediately in multidisciplinary, NIH-supported research training program in physiology and biochemistry of platelet function, blood coagulation and basic and clinical hemorheology. Recent Ph.D. or M.D. required. Send résumé and three references to: Dr. J. H. Joist, Division of Hematology, St. Louis University Medical Center, 1325 South Grand Boulevard, St. Louis, MO 63104, telephone: 314-577-8854. Equal Opportunity/Affirmative Action Employer. M/F/H/V.

**POSTDOCTORAL RESEARCH FELLOWSHIP** to study gene transfer and expression available for a 2-year period beginning 1 April 1987. Applicants should have a Ph.D. and research experience in biochemistry or molecular biology. The project will involve the analysis of expression of transferred human globin genes. Send curriculum vitae and two letters of recommendation to: Dr. A. Keating, Oncology Research, Toronto General Hospital, 200 Elizabeth Street, Toronto, Ontario, Canada M5G 2C4.

## FELLOWSHIPS

**POSTDOCTORAL FELLOWSHIP JULY 1988—**Pathologist or other biomedical scientist (M.D., D.D.S., D.V.M., Ph.D.) for 1- or 2-year program at the Armed Forces Institute of Pathology beginning July 1988. Excellent research training and educational opportunity position; women and minorities encouraged. Send curriculum vitae and brief statement of interests and qualifications to Box 20, SCIENCE, by 1 September 1987.



### POSTDOCTORAL FELLOWSHIP GLOBAL PHOSPHORUS CYCLING

Applications are invited for a 2-year postdoctoral fellowship to work with the SCOPE project on global phosphorus cycling at the National Resource Ecology Laboratory, Colorado State University, Fort Collins. The Fellow will work on two projects: (i) development of a model to simulate phosphorus cycling and C, N, P interactions across a range of ecosystems and (ii) assemble and analyze data on phosphorus fluxes among terrestrial and between terrestrial and aquatic ecosystems.

Applicants should have experience with elements cycling (preferably P) in terrestrial or aquatic ecosystems and strong quantitative skills. Experience with simulation modeling desirable. International and domestic travel will be expected. U.S. citizenship required.

Please submit résumé and three letters of reference by March 1987 to:

U.S. National Committee for SCOPE  
National Research Council  
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Washington, DC 20418  
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### RESEARCH METHODOLOGY IN AGING

**POSTDOCTORAL FELLOWSHIPS** are available for Ph.D.s interested in creating and adapting novel mathematical/statistical approaches to modeling behavioral, social, and/or biological aspects of adult development and aging processes. These National Institute on Aging awards can begin February 1987. Send curriculum vitae, summary of research interests, and names of three references to: John R. Nesselrode, College of Human Development, The Pennsylvania State University, University Park, PA 16802. The Pennsylvania State University is an Equal Opportunity/Affirmative Action Employer.

**RESEARCH FELLOWSHIP AND TRAINING PROGRAM IN PSYCHONEUROIMMUNOLOGY AT UNIVERSITY OF CALIFORNIA AT LOS ANGELES (UCLA).** Available for one or two years beginning July 1987 following completion of Ph.D. degree, or an M.D. and residency program. Practical and didactic research training provided in immunology, behavioral sciences and neurosciences, and in basic or clinical interdisciplinary research under preceptorship of one or more senior investigators. Fellows will be expected to acquire knowledge of all aspects of this interdisciplinary field, in which they lack the background. Salary ranges competitive, depending on level of experience. Address letters of inquiry, outline of a proposal, curriculum vitae, and three letters of recommendation to: Herbert Weiner, M.D., Professor and Program Director, Room C8-861 Neuropsychiatric Institute, UCLA, 760 Westwood Plaza, Los Angeles, CA 90024. UCLA is an Equal Opportunity Affirmative Action Employer.

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Candidates should submit a curriculum vitae, summary of research interests, and the names of three referees to:

**Ashley T. Haase, M.D.**  
**Professor and Head**  
**Department of Microbiology**  
**University of Minnesota Medical School**  
**Box 196 UMHC, 420 Delaware S.E.**  
**Minneapolis, MN 55455**

### **ASSOCIATE/ASSISTANT PROFESSOR INSTITUTE FOR ADVANCED STUDIES IN BIOLOGICAL PROCESS TECHNOLOGY University of Minnesota**

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Applicants must have a Ph.D. in microbiology, genetics, biochemistry or related field. We seek an individual whose research interests are the genetics, physiology or metabolism of microorganisms, preferably the fungi and gram positive bacteria. Applicants for assistant professor must have a minimum of 2 years of postdoctoral training and demonstrated research ability. Applicants for associate professor must have a minimum of five years of professional experience, demonstrated ability to develop an independent research program, and a strong record of publication. Preference will be given to individuals who have an interest in application of their research to biotechnology.

Tenure and teaching responsibilities for this position will reside in the Department of Microbiology or the Department of Genetics and Cell Biology. Tenure is dependent upon meeting written University criteria and recommendation by faculty. Position available fall of 1987. Salary negotiable based on applicant's previous experience. Applicants should send a letter summarizing their teaching experience, goals and research interests, a curriculum vitae, relevant reprints, and have three letters of recommendation sent to:

**Professor Palmer Rogers, Chairman, Search  
Committee**  
**Institute for Advanced Studies in Biological  
Process Technology**  
**240 Gortner Laboratories**  
**1479 Gortner Avenue**  
**University of Minnesota**  
**St. Paul, Minnesota 55108**

Applications should be postmarked no later than April 15, 1987.

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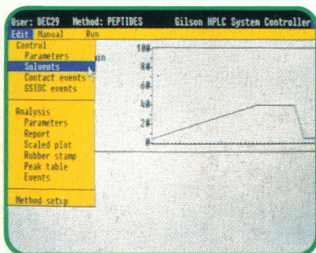


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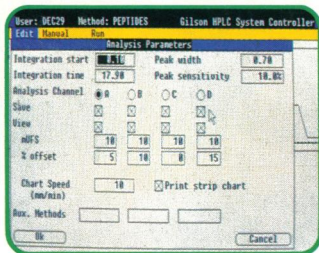
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