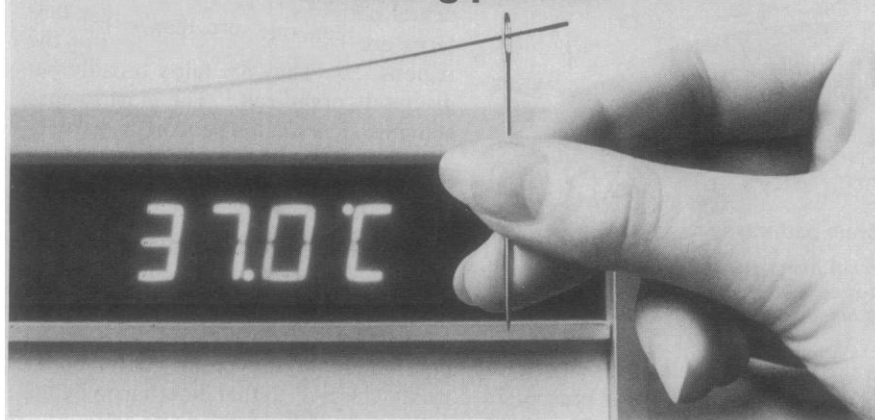
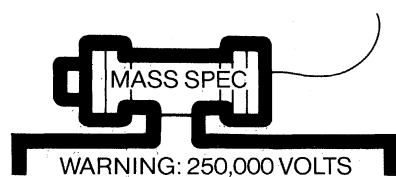


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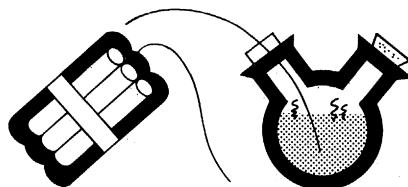
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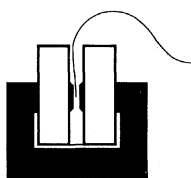
## Electrical & RF Fields



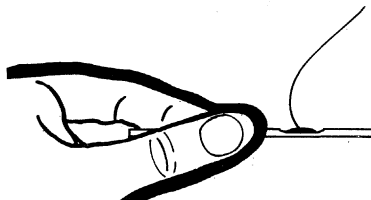
## Explosive Environments



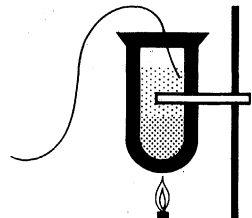
## NMR/ESR



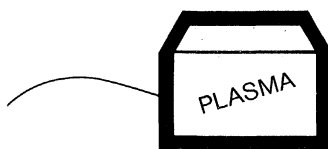
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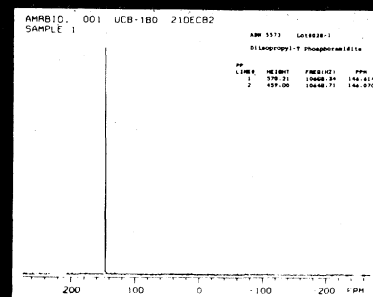
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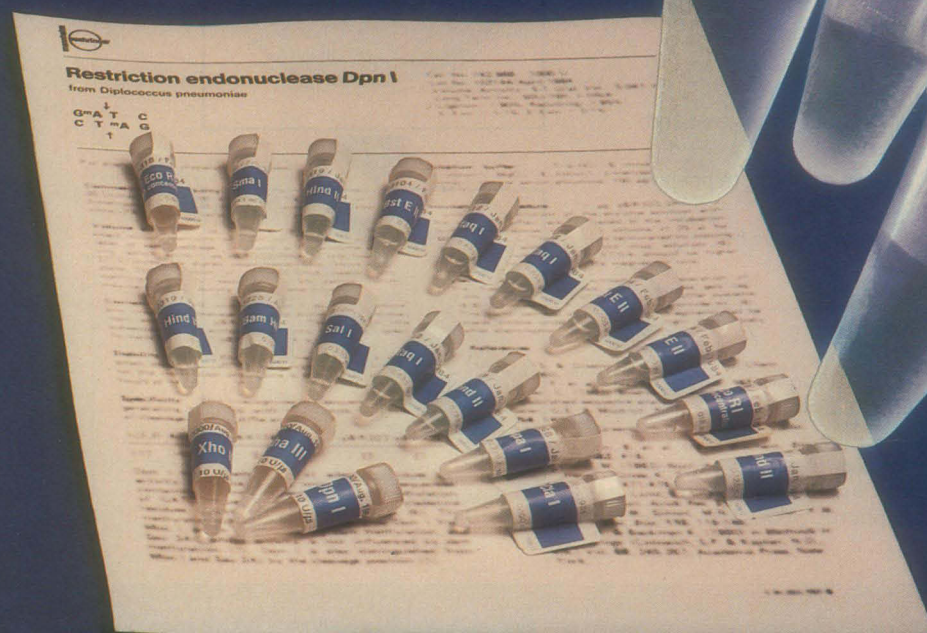
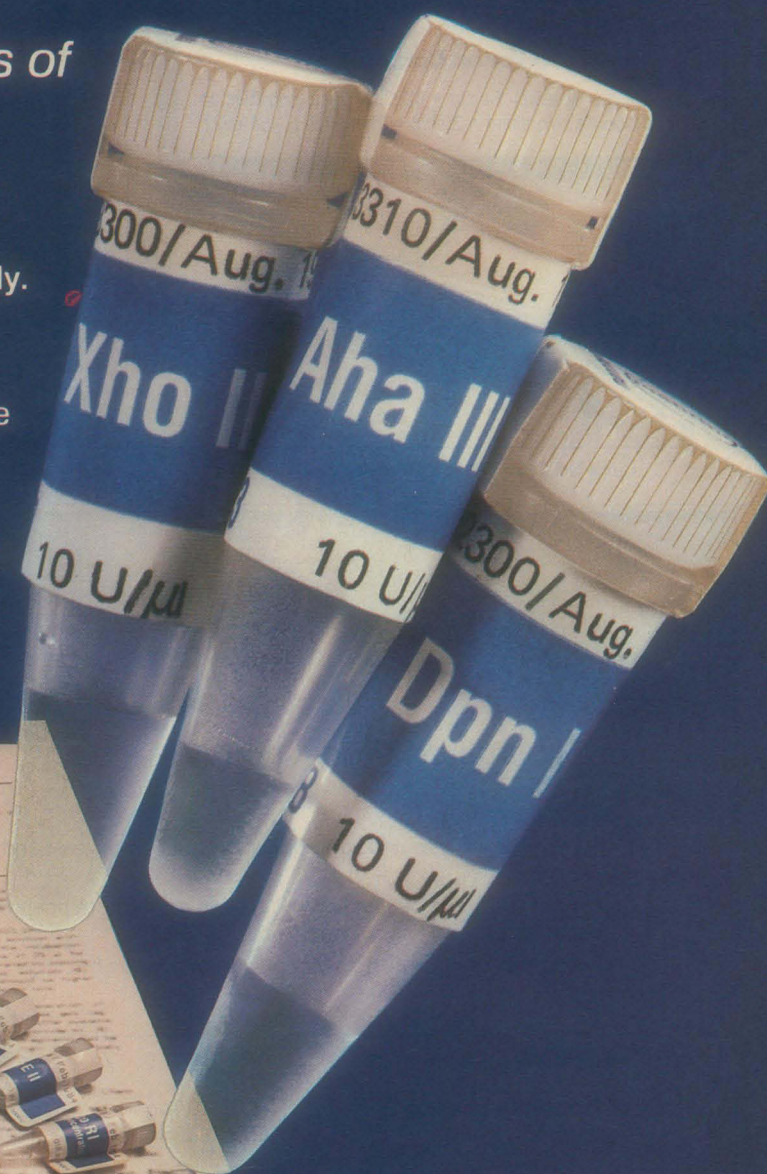
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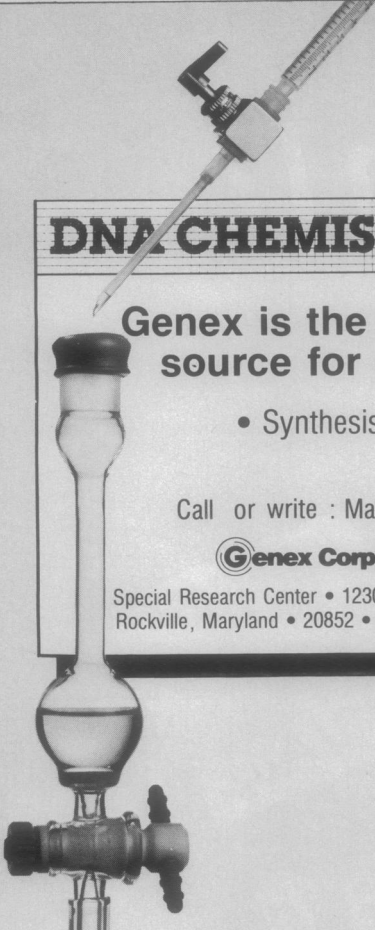
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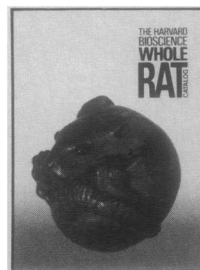
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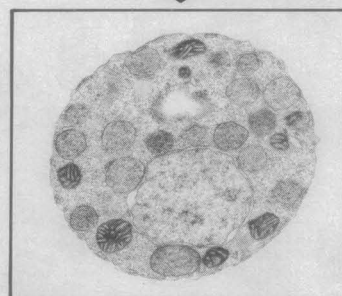
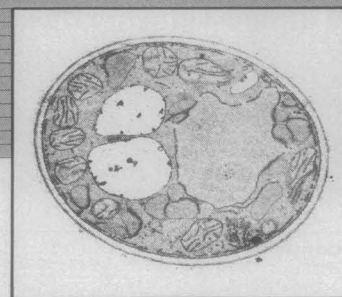
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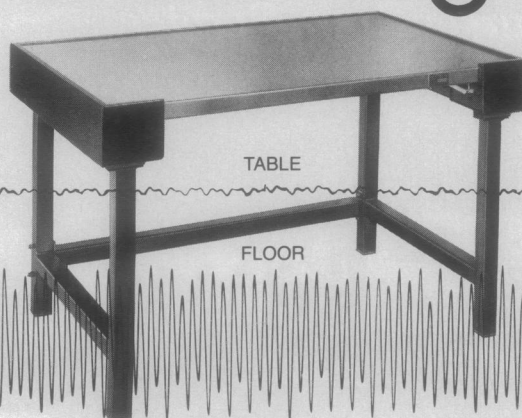
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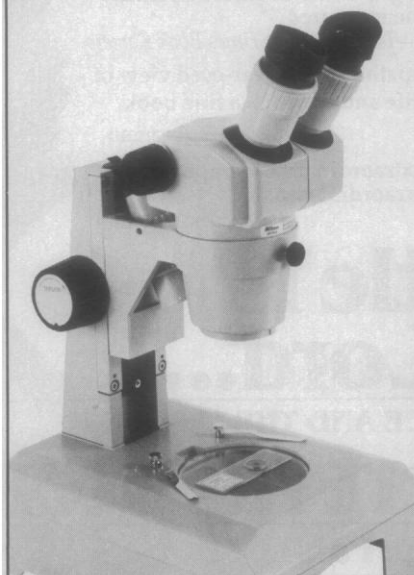
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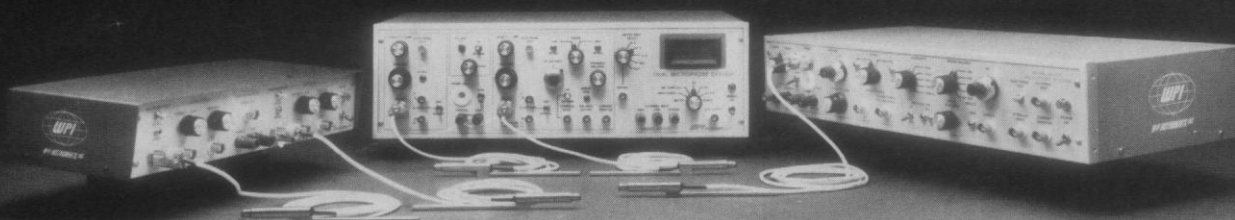
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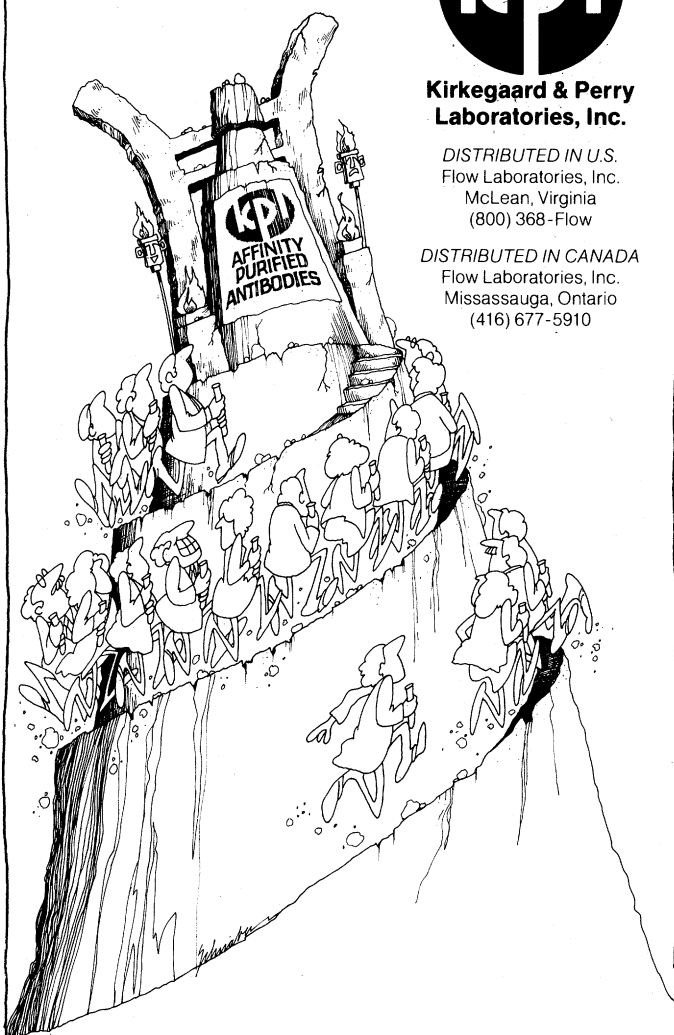
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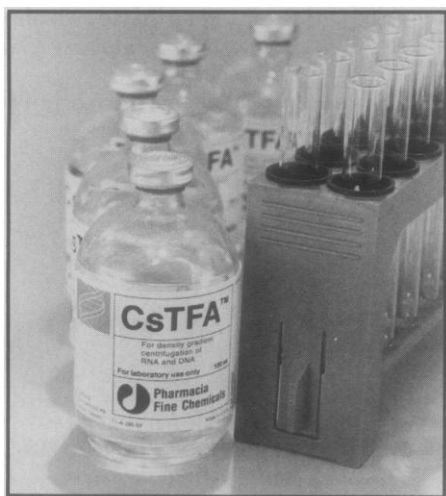
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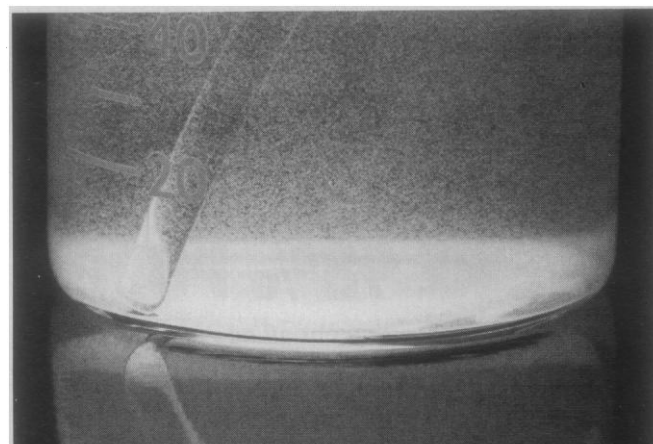
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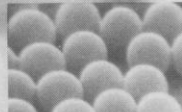


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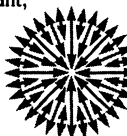


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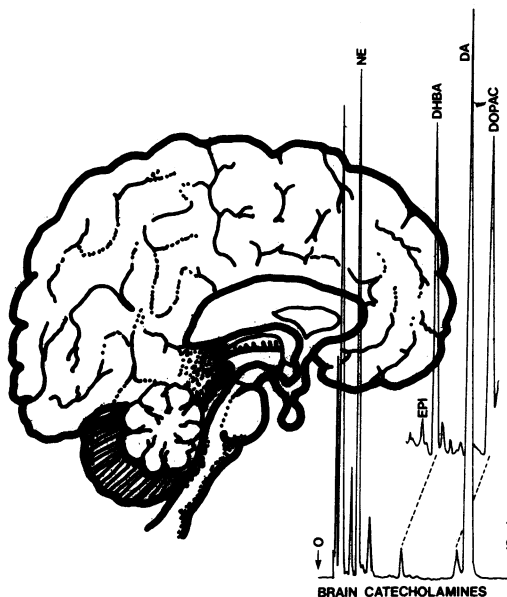
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### ASSISTANT PROFESSOR OF BIOLOGY

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**ASSISTANT PROFESSOR IN PSYCHOBIOLOGY**. The Psychobiology Program of the University of Pittsburgh will have an opening for a tenure-track position at the assistant professor level to begin 1 July 1984. The focus of research by members of the Psychobiology Program faculty is on neurobiological analyses of brain-behavior relations, though candidates with expertise in any area of the neurosciences will be considered. Applicants should have postdoctoral experience and are expected to establish an independent research program. Participation in the graduate and undergraduate teaching program will also be required. Please submit curriculum vitae, a brief statement of research interests, and three letters of recommendation to: **Dr. Theodore W. Berger, 465 Crawford Hall, Psychobiology Program, University of Pittsburgh, Pittsburgh, Pa. 15260.**

## POSITIONS OPEN

**ANALYTICAL CHEMIST**, Ph.D. required by fall 1984. Teaching and/or research experience in spectroscopy and/or instrumentation. Tenure-track faculty. Salary to \$36,540. Send curriculum vitae, undergraduate and graduate transcripts, statement of your research, teaching experience, and goals, three letters of recommendation, and a completed application (all to be postmarked by 30 December 1983) to: **Chairman, Analytical Recruitment Committee, Chemistry Department, California State Polytechnic University, 3801 West Temple Avenue, Pomona, Calif. 91768. Affirmative Action/Equal Opportunity Employer.**

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- 1) ANIMAL PHYSIOLOGY**. Assistant professor, tenure-track. Primary responsibilities: teach undergraduate and graduate physiology courses including anatomy and physiology, and supervise undergraduate and graduate research. A background in systems physiology is required. Ph.D. required. Contact person: **Dr. Frederick C. Hill.**
- 2) HUMAN SEXUALITY**. Temporary, 1-year appointment. Rank and salary commensurate with qualifications. Primary responsibilities: to teach undergraduate courses in human sexuality with ability to assist in anatomy and physiology laboratories. Minimum of a master's degree required. Contact person: **Professor Robert G. Sagar.**

For all of the above positions, send letter of application, résumé, transcripts of all undergraduate and graduate work, and three letters of reference postmarked by 15 January 1984 to the appropriate contact person: **Department of Biological and Allied Health Sciences, Bloomsburg University, Bloomsburg, Pa. 17815.** Our 16-member department emphasizes teaching excellence; student-involved research is encouraged. *Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT PROFESSOR**—The Department of Psychiatry at the Medical College of Pennsylvania/EPP Division has an opening at the assistant professor level for a Ph.D. in biochemistry, clinical chemistry, or pharmacology. Applicant should have experience with gas chromatography, high-pressure liquid chromatography, or radioimmunoassays. Responsibilities include supervising a clinical psychopharmacology laboratory and technicians working in that laboratory. Send curriculum vitae to: **George Simpson, M.D., Medical College of Pennsylvania/EPP Division, Psychiatry Department, 3300 Henry Avenue, Philadelphia, Pa. 19129. Equal Opportunity Employer, M/F.**

### ASSISTANT PROFESSOR OF BIOCHEMISTRY

One new tenure-track position will become available in September 1984. Preference will be given to candidates with two or more years of postdoctoral experience, established record of productivity, funded or pending research grant, and teaching experience. Candidates conducting research in an area which involves the use of recombinant DNA techniques are encouraged to apply. Duties will involve teaching graduate and/or introductory level biochemistry and molecular biology courses. The appointment is for 9 months at a salary commensurate with experience. Please submit curriculum vitae, research synopsis (two to three pages), and letters of recommendation from three references by **31 January 1984.** Send material to:

**Dr. Wesley D. Wicks  
Department of Biochemistry  
University of Tennessee  
Knoxville, Tenn. 37996-0840**

**TWO CHEMISTRY FACULTY POSITIONS**, Ph.D. required by fall 1984. Tenure-track. (i) **Organic chemist**. (ii) **Biochemist**. Must have the ability and desire to teach clinical chemistry. Research interests in areas other than clinical, such as plant, agricultural, physical, and nucleic acid biochemistry. Salary to \$36,540. Send curriculum vitae, undergraduate and graduate transcripts, statement of your research, teaching experience, and goals, three letters of recommendation, and a completed application (all to be postmarked by 30 January 1984) to: **Chairman, Organic Recruitment Committee, or to: Chairman, Biochemistry Recruitment Committee, Chemistry Department, California State Polytechnic University, 3801 West Temple Avenue, Pomona, Calif. 91768. Affirmative Action/Equal Opportunity Employer.**

## POSITIONS OPEN

### UNIVERSITY OF ROCHESTER SCHOOL OF MEDICINE AND DENTISTRY DEPARTMENT OF PHYSIOLOGY ASSISTANT PROFESSOR

Applications for a tenure-track research and teaching position are invited from individuals with postdoctoral research experience. Neurophysiologists or neurobiologists working in areas of interneuronal communication, information processing, or control by neuronal systems will be considered. Applicants should be involved in the development of new concepts or techniques or their application to systems not previously studied. Specific area of interest is less important than the potential for creative work using approaches at the forefront of the field. Curriculum vitae, description of research interests, and a list of four or more references should be sent to:

Dr. Paul Horowicz  
Department of Physiology  
Box 642  
University of Rochester  
School of Medicine and Dentistry  
Rochester, N.Y. 14642

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### ASSISTANT PROFESSOR

The Department of Laboratory Medicine and Pathology, University of Minnesota Medical School, announces an open position at the level of assistant professor in the Divisions of Clinical Chemistry and of Medical Technology. Candidates must have a Ph.D. degree, 2 years of experience in a clinical laboratory, and certification or eligibility with ABCC or NRCC. Teaching experience is necessary. Responsibilities include teaching clinical chemistry, assisting in the service activities of the clinical chemistry laboratory, and establishing an independent research program. Applications consisting of curriculum vitae and three letters of recommendation will be received until 15 February 1984 and may be addressed to: **Karen Karni, Ph.D., Department of Laboratory Medicine and Pathology, Box 198 Mayo Memorial Building, University of Minnesota, Minneapolis, Minn. 55455.** *The University of Minnesota is an Affirmative Action Employer and specifically invites and encourages applications from women and minorities.*

The Department of Biochemistry, Duke University Medical Center, invites applications for the position of **ASSISTANT PROFESSOR**. This is a tenure-track position. The person will be expected to establish a strong independent research program and to teach at the graduate level. The field of interest is open, although some preference may be given to candidates interested in the molecular aspects of cell biology. Send résumé, summary of research interest, and names of three references by 15 January 1984 to: **Robert E. Webster, Department of Biochemistry, Duke University Medical Center, Durham, North Carolina 27710.** *Duke University is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT PROFESSOR, BIOCHEMISTRY.** Full-time lectureship (or tenure-track) position for September 1984. Position is contingent upon budgetary authorization. Ph.D. in biochemistry. Will teach undergraduate and M.S. level biochemistry courses. Must be able to develop an active research program. Send résumé and three letters of recommendation to: **Dr. John C. Shelton, Chairman, Department of Chemistry, California State University, Hayward, Hayward, Calif. 94542.** Application deadline: 15 January 1984. *An Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT PROFESSOR OF MOLECULAR BIOLOGY

The Department of Molecular Biology and Microbiology at Case Western Reserve University invites applications from candidates with strong credentials in molecular biology. We are especially interested in animal virology and molecular immunology but will consider well-qualified applicants in other areas related to gene expression. The appointment provides an excellent opportunity to develop a strong, independent research program in the growing research community at Case Western Reserve. Send curriculum vitae, a statement of research and teaching interests, and the names of four references to: **Dr. Fritz Rottman, Chairman, Department of Molecular Biology and Microbiology, Case Western Reserve University, Cleveland, Ohio 44106.** *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**ASSISTANT PROFESSOR** position is available in baccalaureate Toxicology Program for Ph.D. in toxicology or related discipline with 2 years of experience in toxicology. Teaching experience and a strong commitment to teaching undergraduates preferred. Duties include supervision of student externships and participation in teaching and development of Program. Send curriculum vitae and names of three references by 16 December 1983 to: **Dr. Rita M. Turkall, University of Medicine and Dentistry of New Jersey, School of Health Related Professions, 100 Bergen Street, Newark, N.J. 07103.** *An Equal Opportunity/Affirmative Action Employer.*

**DUKE UNIVERSITY, DEPARTMENT OF BOTANY.** invites applications for an **ASSISTANT PROFESSORSHIP**, tenure-track. Research interest in the systematics, development, cytology, or other aspect of the biology of the bryophytes. Teaching responsibility in bryology and another advanced course of the individual's specialty; participation in introductory courses. Submit curriculum vitae and research plans, and have three letters of recommendation sent by 15 January to: **Professor William Louis Culbertson, Botany, Duke University, Durham, N.C. 27706.** *Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT PROFESSOR

The Department of Ophthalmology, Baylor College of Medicine, is seeking applicants for a tenure-track position as **assistant professor of ophthalmology** beginning 1 July 1984, to participate in basic research in the immunology of ocular infectious and inflammatory diseases. Candidates should have postdoctoral research experience, a record of research accomplishment, and a capacity to function as a collaborative and independent investigator. Current research areas in the department include immune mechanisms of bacterial and fungal keratitis, herpes simplex keratitis, microbial retinoblastitis, and corneal allograft reaction. Opportunities are available for joint appointment in a related basic science department of Baylor College of Medicine. Salary will be commensurate with experience and qualifications. Please send curriculum vitae and a list of three references to:

**Dr. Dan B. Jones, Professor and Chairman  
Department of Ophthalmology  
Cullen Eye Institute  
Texas Medical Center  
Houston, Texas 77030**

*Baylor College of Medicine is an Equal Opportunity/Affirmative Action Employer.*

**ASSOCIATE PROFESSOR OF MICROBIOLOGY.** This position with tenure is available 1 June 1984. Candidates should have an M.D., Ph.D., D.D.S., or an equivalent degree, experience in teaching, and expertise in molecular immunology. They must have at least 4 years of research experience and be recognized nationally as independent investigators. Preference will be given to those candidates who utilize recombinant DNA technology in their work. Interested persons should send curriculum vitae, brief description of research interests, and the names and telephone numbers of three individuals from whom recommendations can be obtained to: **Dr. C. John Abeyounis, Department of Microbiology, School of Medicine, State University of New York at Buffalo, 203 Sherman Hall, Buffalo, N.Y. 14214.** *The University is an Equal Opportunity/Affirmative Action Employer. No person in whatever relations with the University will be subject to discrimination on the basis of age, color, national origin, race, religion, sex, or handicap.*

**THE UNIVERSITY OF CALIFORNIA, IRVINE,** Department of Psychiatry and Human Behavior, under the direction of William E. Bunney, M.D., chairman, is seeking applicants at the **ASSOCIATE OR FULL PROFESSOR** level, for a position in **PSYCHOPATHOLOGY**. Applicants should have a Ph.D. in psychology and research experience in biological psychiatry as related to vulnerability to affective disorders and schizophrenia, measuring of psychopathological dysfunctions, personality assessment, and topographic electroencephalography. Applicants should have a minimum of 8 years of experience in all of the above areas. Salary commensurate with academic rank.

Interested parties should send curriculum vitae and three references to: **Monte Buchsbaum, M.D., Professor, University of California, Irvine, Medical Center, 101 City Drive South, Orange, California 92668.**

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ANNOUNCING

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Interested candidates are invited to send complete résumés, including three references and quoting reference number 0053, to:

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Allelix Inc.  
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Mississauga, Ontario  
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# GENENCOR

## POSITIONS OPEN

### ASSISTANT PROFESSOR—BIOCHEMISTRY THE UNIVERSITY OF DELAWARE

The Department of Chemistry invites applications for a tenure-track faculty appointment in any area of biochemistry, effective September 1984. The successful candidate is expected to teach at both the undergraduate and graduate levels and to establish a vigorous, creative research program. Applicants should send curriculum vitae, including a list of publications, and a concise description of proposed research to: **Faculty Search Committee, Department of Chemistry, 1055 Brown Laboratories, University of Delaware, Newark, Del. 19716.** Three letters of reference should also be sent. *The University of Delaware is an Equal Opportunity/Affirmative Action Employer.* All application materials should be received by 16 December 1983.

**ASSISTANT OR ASSOCIATE PROFESSOR OF PHARMACOLOGY.** The Department of Pharmacology of the West Virginia School of Osteopathic Medicine (WVSOM) seeks an assistant or associate professor of pharmacology. Applicants must have a good background in general pharmacology, with experience in one or more of the following areas: cardiovascular pharmacology, neuropharmacology, chemotherapy, and antibiotics. Significant teaching experience and a demonstrated ability to conduct independent research are also required. Rank and salary will be commensurate with qualifications. Send current curriculum vitae and three letters of recommendation to: **Elizabeth Blatt, Associate Dean for Academic Affairs, WVSOM, 400 North Lee Street, Lewisburg, West Virginia 24901,** by 2 December 1983; the position is available immediately. *An Equal Opportunity/Affirmative Action Employer.*

**BIOCHEMICAL SYSTEMATIST.** Louisiana State University (LSU), Museum of Natural Science, invites applications for an anticipated tenure-track position (assistant curator level) to serve as **curator of viable tissues.** Applicants should have training and research experience in vertebrate biochemical systematics. Duties include research, curation of the LSU Collection of Frozen Tissues, teaching one zoology course per year, and graduate training. The fiscal-year appointment is expected to begin 1 July 1984. Applicants should submit, by 1 March 1984, curriculum vitae, transcripts, and names of three references to: **Dr. M. S. Hafner, Museum of Natural Science, LSU, Baton Rouge, La. 70803.** *An Equal Opportunity/Affirmative Action Employer.*

**BIOCHEMIST/IMMUNOLOGIST.** Postdoctoral position available immediately to work on regulation of secondary metabolism in plants. Candidates should have Ph.D. or equivalent degree with experience in biochemistry, immunology, and possibly recombinant DNA techniques. Applications, including curriculum vitae and names of three references, should be sent to:

**Dr. G. Hrazdina  
Cornell University  
New York State Agricultural Experiment Station  
Geneva, New York 14456**

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

## GENETIC ENGINEER/ MOLECULAR BIOLOGIST

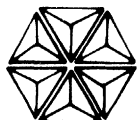
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The candidate will have a strong background in biochemistry, enzymology, protein purification, and physiological and chemical properties of proteins. The position, within the microbiology department, involves development of new enzyme products from microbial sources. Please send résumé to:

**Personnel Manager  
SIGMA CHEMICAL  
COMPANY  
P.O. Box 14508  
St. Louis, Mo. 63178  
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## POSITIONS OPEN

### BIOCHEMIST

#### MEMBRANE BIOCHEMIST

The Agricultural Chemicals Department of E. I. du Pont de Nemours & Company has a Ph.D.-level research position available in the Wilmington, Delaware, area for a membrane biochemist with a strong interest and background in receptor biochemistry, ion channel function, and/or synaptic transmission.

The successful candidate will be expected to develop a fundamental research program and collaborate with physiologists, entomologists, chemists, and other biochemists in designing and developing novel insect control agents.

Salary is competitive and supplemented by a strong benefits program. Qualified candidates should send curriculum vitae, names of three references, and a short statement of interest and experience by 31 January 1984 to: Dr. S. T. Toy, Du Pont Company, Wilmington, Delaware 19898.

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### BIOLOGY FACULTY POSITION

The Biology Department of Seattle University is seeking applications for a full-time, tenure-track position at the assistant/associate professor level beginning in September 1984. Our department has a strong general biology focus. We are looking for an individual with a Ph.D. in a biological science with emphasis in cellular/molecular biology, proven teaching ability, and a strong commitment to undergraduate education. The teaching focus will be cell physiology and genetics, but will also include biology for non-majors and participation in team-taught general biology. Applications, including résumé, transcripts, and three letters of reference should be sent to: Dr. David C. Brubaker, Chairman, Department of Biology, Seattle University, Seattle, Wash. 98122. The deadline for receipt of applications is 31 January 1984. *Seattle University is an Equal Opportunity/Affirmative Action Employer.*

### CELLULAR/MOLECULAR IMMUNOLOGIST

Applications are invited for a senior, tenured faculty position in the Division of Research Immunology in the Department of Pathology and Laboratory Medicine. The individual we seek should already possess a record of outstanding research achievements in the area of cellular and/or molecular immunology. This person will be expected to interact with others on this campus having overlapping interests, to participate in the research training programs for Ph.D. and M.D. students, and to carry only a light formal teaching load. No clinical service responsibilities are involved.

Candidates are invited to submit résumés and three letters of recommendation before 15 January 1984 to: Dr. Darcy B. Wilson (Chairman, Immunology Search Committee) Division of Research Immunology, Department of Pathology and Laboratory Medicine, Philadelphia, Pa. 19104.

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**CELLULAR NEUROBIOLOGY AND BIOPHYSICS.** Postdoctoral associate position available immediately. Work in my laboratory concerns the development and regulation of ionic channels and excitation-contraction coupling in mammalian skeletal muscle. Of particular interest is the involvement of hormonal and trophic influences. Experimental methods include microelectrode and patch voltage-clamp techniques. Beginning salary: \$16,000 to \$18,000. Those interested should send curriculum vitae and names of references to: Dr. Kurt Beam, Department of Physiology and Biophysics, College of Medicine, University of Iowa, Iowa City, Iowa 52242. *An Equal Opportunity/Affirmative Action Employer.*

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### ASSOCIATE PROVOST FOR RESEARCH TEXAS A & M UNIVERSITY

Texas A & M University is seeking applicants and nominations for a new administrative position. **Associate Provost for Research.** This officer will assume general responsibility, under the direction of the president and provost, for the welfare and quality of the research programs of the University, their future development, and their coordination with research done in other parts of the Texas A & M University System.

Specific duties of the associate provost for research will include, but not be limited to, implementing research policies and recommending new policies, developing a long-range strategy for the University's research mission, representing the University in its relationships with other research programs of the Texas A & M University System and with the Texas A & M University Research Foundation, and supervising the operations of the dean of the Graduate College and of other units of the University as may be assigned by the provost.

Qualifications for this position include an earned doctorate, a record of significant achievement in research, demonstrated academic leadership and administrative ability, an ability to communicate effectively with internal and external constituents, and a commitment to the independence and integrity of research and the interdependence of research and teaching. Knowledge of and participation in the federal grants and contracts peer review process is highly desirable as is knowledge of the promotion of grant and contract work through the private sector.

Candidates must be available to assume the position no later than 1 September 1984. Nominations and applications, with résumés and names of references, must be submitted on or before 15 December 1983 to:

**Dr. Charles E. McCandless**  
Associate Provost  
Texas A & M University  
College Station, Texas 77843

*Texas A & M University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### CELL BIOLOGY Princeton University Department of Biology

The Department of Biology wishes to appoint a senior cell biologist as part of our effort to build a strong group in that area. Please write to: **J. T. Bonner, Chairman, Department of Biology, Princeton University, Princeton, N.J. 08544.**

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

### CHAIRPERSON Department of Biology

Position available for chairperson, Department of Biology, Cleveland State University. Duties include providing service and leadership in teaching and research. Candidates must have record of scholarly accomplishment, a commitment to undergraduate and graduate teaching, administrative potential, earned doctorate in any of the biological sciences, and be eligible for a senior-level appointment. Salary negotiable, dependent upon experience.

Cleveland State University is an urban institution with 19,000 students. The Department of Biology consists of 15 faculty members and has recently expanded into modern research facilities in a new science building. The department awards the B.S. and M.S. in biology as well as the Ph.D. in regulatory biology in conjunction with the Research Division of the Cleveland Clinic Foundation.

Candidates should submit curriculum vitae, short statement of professional goals, and names of at least three references by 16 December 1983 to: **Dr. Peter C. Baker, Chairperson, Search Committee, Department of Biology, Cleveland State University, 1983 East 24 Street, Cleveland, Ohio 44115.**

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### CHAIRPERSON FOOD SCIENCE AND HUMAN NUTRITION DEPARTMENT, UNIVERSITY OF FLORIDA

The Food Science and Human Nutrition Department, a unit of the Institute of Food and Agricultural Sciences, is seeking an individual to serve as chairperson. The department is composed of 30 faculty who are responsible for research, teaching, and extension programs in food science, human nutrition, dietetics, and pesticides. Instructional activity involves both undergraduate education and graduate training through the Ph.D. degree. Candidates must have an earned doctorate in food science, nutritional science or a closely related discipline and demonstrated professional leadership with the ability to attract extramural funding. Qualifications include a strong commitment to departmental administrative affairs requiring organizational skills and the ability to communicate effectively with the faculty, university administration, and the public. A résumé documenting academic training, professional experience, and scholarly publications as well as transcripts of all academic training and the names of three references must be submitted by 1 March 1984 to: **Dr. James S. Dinning, Chairman, Search and Screen Committee, Department of Food Science and Human Nutrition, University of Florida, Gainesville, Florida 32611.** *The University of Florida is an Equal Opportunity/Affirmative Action Employer.*

**CHAIRMAN, Department of Oceanography.** Due to an internal promotion of the former chair, the Department of Oceanography is now seeking a new chair. Applications are invited from persons with an earned doctorate, teaching experience, and a record of quality research and publication in oceanography. Some administrative experience is desirable, but not mandatory.

Old Dominion University is a state-supported university. Oceanography is a priority program offering M.S. and Ph.D. degrees with concentrations in biological, chemical, geological, and physical oceanography. Some undergraduate service courses are also offered. The departmental emphasis is on graduate teaching and research. The department has at present 15 faculty and 70 students. This position is state-supported and will be available by 1 August 1984 or earlier, if possible. Applicants should submit curriculum vitae and a list of three references by 1 January 1984 to: **Dr. William M. Dunstan, Search Committee, Department of Oceanography, Old Dominion University, Norfolk, Virginia 23508.** *Old Dominion University is an Affirmative Action/Equal Opportunity Institution.*

## POSITIONS OPEN

**CELL BIOLOGIST.** Department of Anatomy with modern research facilities at a new state medical school campus seeks candidates for a faculty position at the assistant or associate professor level. Candidates must have advanced postdoctoral training and the capability to successfully compete for research support. Preference will be given to individuals who utilize cellular and molecular approaches to investigate biological structure-function relationships. The appointment emphasizes research and an academic background which will permit participation in team-taught departmental courses as well as advanced graduate courses. Salary level is very competitive and depends upon previous experience. For full consideration, candidates must respond by 15 January 1984 with curriculum vitae, a statement of past and planned research activity, and the names and addresses of three references to: **Dr. David O. DeFouw, Chairman of Search Committee, Department of Anatomy, UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY—New Jersey Medical School, 100 Bergen Street, Newark, N.J. 07103.** *Applications from women and minority candidates are encouraged. An Equal Opportunity/Affirmative Action Employer.*

University of Maryland University College seeks two graduate faculty members in the following areas for the 1984–1985 academic year:

- 1) **COMPUTER SYSTEMS AND TECHNOLOGY MANAGEMENT**, and
- 2) **COMPUTER SYSTEMS AND HUMAN FACTORS.**

These faculty will participate in an interdisciplinary management program, the master of general administration, which has tracks in marketing, management information systems, health care administration, and organizational training; an M.S. in program evaluation and organizational assessment; an M.S. in technology management; an M.S. in computer systems management; and an executive general administration program. Additional planned programs include an M.S. in engineering management and an M.S. in applied communications management.

Successful candidates will have a minimum of an M.S. in computer science and Ph.D., D.B.A., or D.P.A. in another discipline, and should be able to present evidence of successful teaching (including graduate) and research and/or scholarly publications. Salary and rank will be commensurate with qualifications.

Send curriculum vitae and names of three references to:

**Assistant Dean, Technology and Computer Systems  
University of Maryland University College  
Graduate School  
University Boulevard at Adelphi Road  
College Park, Md. 20742**

Application deadline is 13 January 1984. *Equal Opportunity/Affirmative Action Employer.*

### DEVELOPMENTAL GENETICS

**POSTDOCTORAL POSITIONS** available for the study of developmental genetics in mice. Areas of study include developmental neurobiology, sex differentiation, oogenesis, hematology, cell proliferation, and endocrinological disorders of development. Emphasis is placed on developing skills with molecular techniques, particularly recombinant DNA technology. Financial support by an NIH training grant (NRSA) and other sources. Qualified applicants are invited to send curriculum vitae, including statement of research interests, and names of three references to: **Dr. Leslie P. Kozak, Program Director, The Jackson Laboratory, Bar Harbor, Maine 04609.** *An Equal Opportunity/Affirmative Action Employer.*

**DIRECTOR, SCHOOL OF NATURAL RESOURCES, THE UNIVERSITY OF VERMONT.** The School offers academic programs in environmental studies, forestry, natural resource planning, recreation management, resource economics, and wildlife and fisheries biology, and administers the Vermont Water Resources Extension unit. There are currently 18 full-time faculty, 354 undergraduate students, and 46 master's students. Candidates should possess the Ph.D. in one of the disciplines represented within the School and present a record of leadership, academic achievement, and administrative experience. The position will be available 1 July 1984. Nominations and applications (including résumé) must be submitted by 15 January 1984 to: **Natural Resources Search Committee, Office of Academic Affairs, The University of Vermont, Waterman Building, Burlington, Vt. 05405-0610.** *Equal Opportunity/Affirmative Action Employer.*

# Growth Opportunities In Biotechnology

Syntex Medical Diagnostics is a newly created division of Syntex Diagnostics chartered to develop high technology immunochemical products for use by physicians for immediate, reliable, or "in-office" testing. Drawing upon the expertise of Syntex in pharmaceuticals and Syva in diagnostic immunology, Syntex Medical Diagnostics will develop tests for therapeutic drug monitoring, infectious disease detection, hormones, and clinically relevant proteins.

We are now forming a core research group to develop these exciting applications of advanced medical technology. This is a unique opportunity, in that it offers the challenges and excitement of a start-up venture, yet the backing, resources, and benefits of an established corporation.

## **Opportunities currently exist for:**

- **Senior Biochemists** to develop immunoassays to detect microbial antigens, therapeutic drugs, or metabolites. Positions require a PhD in Biochemistry, Chemistry, Immunology or Microbiology, with 2-4 years' postdoctoral experience.
- **Senior Bio-Organic Chemists** to develop new immunochemical assay methods, and new synthetic methods for immuno-enzyme conjugates and immunogens. Requires PhD in Biochemistry or Chemistry, with 2-4 years' postdoctoral experience.

- **Research Biochemists** to develop immunoassays for quantification of therapeutic drugs and detection of infectious diseases. Requires BS/MS in Chemistry, Biochemistry, Immunology, or Microbiology, with 2-4 years' immunochemistry/microbiology/diagnostics experience.

- **Research Immunochemist** to develop monoclonal antibodies including cell fusions, hybridoma cloning, antibody screening and immunoassay evaluation. Requires BS/MS in Biochemistry or Biology, with 2-4 years' tissue culture and hybridoma experience.

Syntex Medical Diagnostics offers qualified candidates an exceptional research environment, along with excellent compensation and comprehensive benefits.

To apply, send a complete resume to Syntex Medical Diagnostics, Dept. SC, P.O. Box 10058, Palo Alto, CA 94303. All inquiries will be treated with utmost discretion. We are committed to an equal opportunity hiring policy, m/f/h/v.



**Syntex Medical Diagnostics**



## POSITIONS OPEN

**DEVELOPMENTAL BIOLOGY.** Tenure-track, assistant or associate professor to start 1 September 1984. Candidate must have at least 2 years of postdoctoral experience. The successful applicant will be expected to establish and maintain a vigorous research program, to supervise graduate students, and to teach an undergraduate course in developmental biology. Preference will be given to individuals whose research deals with biochemical and molecular aspects of the regulation of eukaryotic development. Current in-house research in developmental biology includes: molecular biology of nematode development; hormonal control of postnatal development in mammals; sperm biology and fertilization; slime mold development; regulation of gene expression by herpes virus; development of lignification in plants. Interested parties should submit curriculum vitae, representative reprints, a research summary, and names of three referees to: **Dr. Susan J. Henning, Chair, Developmental Search Committee, Department of Biology, University of Houston, Houston, Texas 77004.** Deadline: 1 February 1984. *An Equal Opportunity Employer.*

## NATIONAL OPTICAL ASTRONOMY OBSERVATORIES DIRECTOR—NSO

Applications and nominations are invited for the position of Director, National Solar Observatory (NSO), a unit of National Optical Astronomy Observatories (NOAO). The position also carries the designation of associate director, NOAO. The incumbent will be located either in Tucson, Arizona, or in Sunspot, New Mexico, and will report to the director, NOAO. He/she will form one of a small group of individuals who will coordinate and guide the development of the NOAO into an organization characterized by a vigorous, productive, and enterprising program of staff science, and imaginative and effective service to the user community. The position offers excitement, challenge, and the promise of deep personal satisfaction derived from direct participation in the growth of a new institution dedicated to the highest standards of in-house research, and service to the astronomical community. Applicants must have an earned doctorate in astronomy, or a closely related physical science, and a distinguished record of achievement in astronomy; evidence of leadership ability of a high order will also be sought. Interested individuals who feel that their background and temperament match the opportunities and challenge inherent in contributing to the growth of this new organization are invited to forward applications, with names of at least three people from whom a confidential evaluation can be sought, to: **The Chairman, Search Committee—Director NSO, 1002 North Warren Avenue, Tucson, Ariz. 85719.** Closing date for applications is 1 January 1984. Further information may be obtained from: **Dr. John T. Jefferies, Director, NOAO, telephone: 602-881-1960.** *Equal Opportunity/Affirmative Action Employer.*

## ECOSYSTEM MODELER

A full-time research position for an ecosystem modeler is available at the Savannah River Ecology Laboratory of the University of Georgia. Candidate must have a Ph.D. degree, publications in the open literature, relevant experience, and a strong background in modeling ecosystem processes. Candidate must be a U.S. citizen. Responsibilities for this faculty position are to develop a strong basic research program and participate in the applied research programs of the laboratory. Research emphasis will be on modeling the cycling of heavy metals and nutrients in aquatic systems using both kinetic and equilibrium parameters. A chemical background would be desirable. Knowledge and experience with computer simulation is necessary. Ability to work collaboratively with other staff and strong communication skills will be weighed heavily in evaluating candidates. Rank and salary are negotiable, depending upon the professional record of the applicant. Applicants should send résumés, reprints, and the names, addresses, and telephone numbers of four individuals who may be contacted as references to:

**Dr. Kenneth W. McLeon**  
Chairman of Search Committee  
Savannah River Ecology Laboratory  
Drawer E  
Aiken, South Carolina 29801

Applications will be accepted until 15 December 1983. *The University of Georgia is an Equal Opportunity/Affirmative Action Institution.*

## POSITIONS OPEN

## NATIONAL OPTICAL ASTRONOMY OBSERVATORIES DIRECTOR—KPNO

Applications and nominations are invited for the position of director, Kitt Peak National Observatory (KPNO), a unit of National Optical Astronomy Observatories (NOAO). The position also carries the designation of associate director, NOAO. The incumbent will be located in Tucson and will report to the director, NOAO. He/she will form one of a small group of individuals who will coordinate and guide the development of the NOAO into an organization characterized by a vigorous, productive, and enterprising program of staff science, and imaginative and effective service to the user community. The position offers excitement, challenge, and the promise of deep personal satisfaction derived from direct participation in the growth of a new institution dedicated to the highest standards of in-house research, and service to the astronomical community. Applicants must have an earned doctorate in astronomy, or a closely related physical science, and a distinguished record of achievement in astronomy; evidence of leadership ability of a high order will also be sought. Interested individuals who feel that their background and temperament match the opportunities and challenge inherent in contributing to the growth of this new organization are invited to forward applications, with names of at least three people from whom a confidential evaluation can be sought, to: **The Chairman, Search Committee—Director KPNO, 1002 North Warren Avenue, Tucson, Ariz. 85719.** Closing date for applications is 1 January 1984. Further information may be obtained from: **Dr. John T. Jefferies, Director, NOAO, telephone: 602-881-1960.** *An Equal Opportunity/Affirmative Action Employer.*

The State of Arkansas invites applications for the positions of **DIRECTOR AND ASSISTANT DIRECTOR** of the Arkansas Science and Technology Authority. The aim of the authority is to promote the development of the science and technology research resource base throughout the state of Arkansas. The authority will work closely with Arkansas colleges and universities, the National Center for Toxicology Research, federal and private research facilities, and other agencies of the state of Arkansas.

The director will report to the 16-member Board of Directors appointed by the governor. A background in some aspect of science and technology is desirable as is an advanced degree in an appropriate field. Organizational skills will be crucial, and experience in working with state or federal agencies of a similar nature, as well as the private sector, is a marked advantage. The person selected will be the first person to hold this position and will have flexibility in developing a new authority.

Applications and résumés should be addressed to: **Arkansas Science and Technology Authority, P.O. Box 1122, State University, Arkansas 72467,** and must be received no later than 2 December 1983. *The state of Arkansas is an Equal Opportunity Employer.*

## ENTOMOLOGIST

Will accept entry level with M.S. degree entomology to monitor both beneficial and pest population in fields and stored products, 40 hours per week. Delano, California, location. Salary: \$27,000 a year. Send this ad and your résumé to: **Job Number 5862, P.O. Box 865, Sacramento, Calif. 95804,** not later than 3 December 1983.

## EUKARYOTIC RNA PROCESSING POSTDOCTORAL POSITIONS

Several funded postdoctoral positions are available in the laboratory of Thoru Pederson, to work on messenger RNA processing and small nuclear RNA's. Areas of emphasis include: (i) the ribonucleoprotein structure of pre-mRNA's, with particular reference to sequence-specific (intron-related) aspects, (ii) transcription, processing, RNP assembly and functions of small nuclear RNA's, and (iii) elucidation of signals for nuclear-cytoplasmic RNA traffic. Send curriculum vitae, including bibliography, a synopsis of previous research, and at least two letters of recommendation, to: **Dr. Thoru Pederson, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.**

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

## POSITIONS OPEN

**EXECUTIVE DIRECTOR—PROFESSIONAL ASSOCIATION.** The Selection Advisory Committee to the National Association of Biology Teachers (NABT) invites nominations and applications for the position of **executive director.** NABT is a professional organization of educators and scientists devoted to the improvement of education in the biological sciences. The Association maintains its national headquarters in Reston, Virginia. It publishes *The American Biology Teacher* and sponsors an annual convention in addition to many special projects and workshops. It is desirable for the candidate to have experience in teaching in the biological sciences, administrative experience, and a demonstrated capacity to exercise educational leadership. Deadline for completed applications is 1 January 1984. Nominations and inquiries should be sent to: **Roger Olstad, College of Education, 115 Miller Hall DQ-12, University of Washington, Seattle, Washington 98195.** *An Equal Opportunity/Affirmative Action Employer.*

## FACULTY POSITION IN BIOCHEMISTRY

A tenure-track position in the Department of Chemistry at the assistant professor level to be filled no later than 1 September 1984. The candidate must have a strong background in chemistry and a Ph.D. in biochemistry or bio-organic chemistry with appropriate postdoctoral or equivalent experience in the areas of plant, invertebrate, environmental, or microbial biochemistry. Applicants showing potential for bridging the various natural resource and chemical disciplines will be most highly desirable. Participation in the teaching of beginning courses in biochemistry is required. A letter of application and statement of research interest and plans, a résumé, and three letters of recommendation should be sent by 15 December 1983 to: **Dr. Robert T. LaLonde, Department of Chemistry, State University of New York College of Environmental Science and Forestry, Syracuse, N.Y. 13210.** *An Affirmative Action/Equal Opportunity Employer.*

**FACULTY POSITION IN MOLECULAR BIOLOGY.** Pending budgetary approval, applications are invited for a faculty position at the rank of assistant professor in the Department of Molecular Biology, University of California, Berkeley. (Exceptionally qualified candidates not presently holding a tenured position may also be considered for appointment to the tenured rank of associate professor.) The department is interested in persons with highly productive research programs in eukaryotic molecular biology focusing on chromosome structure and/or gene expression and regulation. Applicants should send curriculum vitae, bibliography, copies of two representative recent publications, statement of teaching and research objectives, and names and addresses of three references to: **Chairman of the Search Committee, Department of Molecular Biology, University of California, Berkeley, Calif. 94720.** Applications should be received before 15 January 1984. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

**WANTED . . . full-time FACULTY POSITIONS** available in the Department of Anatomy of Philadelphia College of Osteopathic Medicine. Qualifications include Ph.D. in anatomy; experience in teaching gross anatomy; lecture and laboratory; training in histology, neuroanatomy, and embryology.

Excellent benefit program. Salary commensurate with position. Send particulars and résumé to: **V. T. Cipolla, D.O., Chairman, Department of Anatomy, Philadelphia College of Osteopathic Medicine, 4150 City Avenue, Philadelphia, Pa. 19131.** *An Equal Opportunity Employer.*

## FACULTY POSITIONS COLLEGE OF MEDICINE UNIVERSITY OF KENTUCKY

### Basic Science Disciplines

Medical microbiology and immunology—Faculty positions available for individuals with specialization as a bacterial geneticist and a eukaryotic molecular geneticist at the assistant/associate professor level and a pulmonary immunologist at the associate/full professor level.

Submit curriculum vitae to:

**Shirley Burgess**  
Special Assistant to the Dean  
College of Medicine  
University of Kentucky  
800 Rose Street  
Lexington, Kentucky 40536-0084

*University of Kentucky/Equal Opportunity Employer.*

## RESEARCH SCIENTISTS

### Seek the Exceptional...

**...in Company Capability.** Molecular Genetics, a rapidly growing biotechnology firm, is the leader in the innovative application of biotechnology to agricultural markets. This focus on plant research and animal health care is supplemented by product development in other areas where company ability and market opportunity are matched, including human health care. Scientific excellence in a variety of disciplines accounts for our remarkable progress and success.

**...in Scientific Opportunity.** An academic orientation combined with the opportunity to solve problems creates a stimulating atmosphere for our scientific staff. We are always looking for Scientists at the BS, MS and PhD levels interested in joining our highly skilled and motivated research staff in the following areas: Molecular Biology, Immunology, Microbiology, Protein Chemistry, DNA Chemistry, Plant Tissue Culture, Plant Molecular Biology, Biochemical Engineering, Fermentation Technology.

**...in Lifestyle.** The Minneapolis/St. Paul area is known for its exceptional quality of life. Our pleasant suburban location offers you the best of the Minnesota outdoors together with the diverse cultural offerings of the Twin Cities.

If you seek the exceptional, please send a detailed resume and a list of three references in confidence to:

### Molecular Genetics Inc

William J. DeLorbe, Ph.D.  
10320 Bren Road East  
Minnetonka, MN 55343

An Equal Opportunity Employer.



## Biochemical Engineer

A challenging career opportunity currently exists in the Biotechnology Section of the Celanese Research Company for a Ph.D. with proven expertise in the scale-up of microbial processes, from the bench to the pilot plant stage and beyond.

The successful candidate will join our professional team of dedicated scientists engaged in developing biotechnological processes for the production of a variety of chemicals. The primary responsibility of this R & D position will be to provide effective interfacing between respected teams of research biologists and chemical engineers toward the successful commercialization of current industrial research programs.

In addition to a Ph.D. in Biochemical Engineering or Microbiology, applicants must possess a minimum of 2 years in-depth experience in fermentation with an emphasis on bioprocess control and development. Good communication skills and the ability to relate to people on all levels is essential.

Located at our Corporate Research Center in Summit, New Jersey, this position offers a salary commensurate with credentials, a comprehensive benefits package, in addition to a professionally stimulating and rewarding environment.

To be considered for this exceptional opportunity please forward a resume with salary history in confidence to: **Employee Relations, Dept. SB, Celanese Research Company, 86 Morris Avenue, Summit, New Jersey 07901.**



**ELANESE**

We are an equal opportunity employer M/F/H/V

Summit Technical Center

## DIRECTOR OF MOLECULAR BIOLOGY/MICROBIOLOGY

**Creative BioMolecules** is a company engaged in Technology Development in protein production/purification and DNA chemistry for Biotechnology. The Company has facilities for protein biochemistry located in the Boston area, as well as DNA chemistry and molecular biology laboratories in the San Francisco Bay Area.

The Company has a position for a Director of Molecular Biology/Microbiology in our South San Francisco labs. The candidate will have a track record of scientific excellence in molecular biology, molecular genetics and microbiology as well as familiarity with problems of recombinant DNA applications in the area of protein production.

He or she will lead a number of R and D programs and organize a team of scientists to perform such activities. The candidate will be responsible for the development of efficient microbial systems for the production of commercially important proteins. We anticipate research and development in the area of *Bacillus* and yeast. The position will also require strong communication links with the Director of DNA chemistry and the Director of protein biochemistry.

This is a senior appointment that includes a benefits package with substantial stock option and a highly competitive salary. Applicants should send their resume to:

Ms. Carol Ricci  
Personnel Department  
385 Oyster Point Blvd., Suite #4  
South San Francisco, CA 94080



**Creative BioMolecules**

## SCIENTIST

Cetus Corporation, a leader in biotechnology, is seeking an individual with experience with human tumor xenograft work in nude mice. An interest in our experience with monoclonal antibody technology or peptide toxin technology is a desirable asset.

The candidate is required to have a Ph.D. degree or equivalent, with some post-doctoral experience and a research record. Our speciality is immunotoxins for cancer therapy and the successful candidate will be responsible for joining the project team and running a very well equipped nude mouse laboratory. Your duties will include originating and conducting experiments to test the efficacy and distribution of these novel molecules.

Interested candidates should respond with current resume, in confidence to:

Cetus Immune  
Corporation  
Dr. Frankel  
3400 West  
Bayshore Road  
Palo Alto, CA 94303



An equal opportunity employer m/f/handicapped

**THE INTERNATIONAL CROPS  
RESEARCH INSTITUTE FOR THE  
SEMIARID TROPICS (ICRISAT)  
needs**

**PLANT BREEDER (CHICK-PEA)**

To work in a multidisciplinary program involving physiology, botany, microbiology, entomology, biochemistry, and pathology in the production of high-yielding and stress-tolerant cultivars of chick-pea, particularly for the semiarid tropics. The breeding program will put emphasis on the development of improved genotypes for use in national programs, cooperation with the world's chickpea breeders, and development of new genotypes that will extend the adaptation of the crop to additional production systems and environments. Fieldwork in the chick-pea breeding program is currently done on Vertisols at ICRISAT Center, substantially supported by fieldwork at Hissar in northern India. The chick-pea breeding program at ICARDA, Syria, is integrated with that at ICRISAT Center, and the breeder provides leadership for the joint breeding program.

**Qualifications:** Ph.D. in plant breeding or genetics, with specialization in plant breeding. Significant experience of plant breeding as evidenced by scientific publications, ability to lead a team of specialists and technicians. Sound knowledge of statistics and genetics is essential. A minimum of 10 years of experience of research in a tropical or subtropical country with food legume crop(s) is desirable.

Salary for the position is at principal staff level, according to qualifications and experience, with attractive fringe benefits. Work would be centered at ICRISAT Center (1394 hectares) near Hyderabad, India, where excellent scientific and technical support is available. Hyderabad has international airline connections, and living conditions are good.

Send résumé and names of three referees by 15 December 83 to: **Director General, ICRISAT Patancheru, P.O. 502 324, A.P., India.**

**POSTDOCTORAL POSITIONS  
in  
ANALYTICAL CHEMISTRY  
and  
BIOENGINEERING**

Battelle Columbus Laboratories, a world leader in research and development, is searching for postdoctoral candidates to fill challenging positions in our new National Center for Biomedical Infrared Spectroscopy. This Center is being created through NIH funding from the Division of Research Resources, and will offer exciting new opportunities for research. Specifically, we are seeking individuals for the following positions:

**ANALYTICAL CHEMIST/SOFTWARE POSTDOCTORAL**—Ph.D. or equivalent in chemistry with experience in computer science required, FT-IR desirable. Will conduct a core research program involving development of a user friendly system, support a protein interpretation research program, and provide general support to Center staff. Experience with Data General or Digital minicomputers would be a plus. Salary range: \$19,000 to \$25,000 for first year (postdoctoral).

**POSTDOCTORALS**—Ph.D. or equivalent in area related to bioengineering-biomaterials, classical biochemistry, and protein chemistry. Skills in FT-IR spectral interpretation, search system design and computer programming desirable. Salary range: \$18,000 to \$20,000 per year.

The above positions are for a 1-year initial appointment with possibilities for permanent positions with Battelle's multidisciplinary research operations in biotechnology. U.S. citizenship or permanent residency required for all positions. Interested individuals should send résumé with references to: **Richard C. Needles, Employment Department G-4,**



**Battelle**

Columbus Laboratories

505 King Avenue  
Columbus, Ohio 43201

**POSITIONS OPEN**

The Department of Animal Science, Iowa State University, is seeking candidates for **FOUR FACULTY POSITIONS** at the assistant professor level in extension. Applicants must have training and experience relating to the species involved. Positions available are: beef cattle and/or swine management, sheep management, dairy management and reproduction, and livestock enterprise management with emphasis on programs for youth. All positions require a Ph.D. in the animal sciences with training and research experience related to position responsibilities. Applicants should send curriculum vitae and transcripts, and have three references forward letters of recommendation to: **Dr. S. A. Ewing, Head, Department of Animal Sciences, 101 Kildee Hall, Iowa State University, Ames, Iowa 50011.**

**FACULTY POSITION**, tenure-track, assistant or associate professor of anatomy and cell biology. Preference given to a cell biologist with interests in the neurosciences and a strong pre- and postdoctoral background of productive research. Send a complete résumé and bibliography as well as letters from three references to: **Dr. Douglas E. Kelly, Chairman, Department of Anatomy and Cell Biology, University of Southern California School of Medicine, 1333 San Pablo Street, Los Angeles, California 90033. An Equal Opportunity Employer.**

**FACULTY POSITIONS IN PHARMACOLOGY  
AND TOXICOLOGY**

The Washington State University College of Pharmacy has available two annual appointment, tenure-track assistant professor positions beginning 1 July 1984. A **PHARMACOLOGIST** is sought to participate in the teaching of pharmacology to professional pharmacy students. A professional degree in pharmacy and a Ph.D. are required for this position. A **TOXICOLOGIST OR PHARMACOLOGIST** is sought to teach toxicology and pharmacology to professional students. A Ph.D. is required for this position and a pharmacy degree is preferred. Both positions will involve teaching and direction of graduate student's research in the Pharmacology/Toxicology Graduate Program. Development of a vigorous, independent research program in molecular pharmacology or toxicology is expected. Postdoctoral experience is preferred for both positions. Send letter of application, curriculum vitae, names and addresses of three references, a summary of research interests, and a description of teaching experience by 1 February 1984 to: **Dean Larry M. Simonsmeier, College of Pharmacy, Washington State University, Pullman, Washington 99164-6510. Washington State University is an Equal Opportunity/Affirmative Action Employer.**

**FISHERIES OCEANOGRAPHY:** Applications are invited for a 12-month, tenure-track position as assistant professor in the College of Oceanography with a joint appointment in the Department of Fisheries and Wildlife. Applicant must have demonstrated ability to conduct independent research and obtain research funding in the area of ecology of marine fishes or nekton. Workers with interests in ecology, fisheries oceanography, or population biology of nekton will be considered. Applicant must have Ph.D. Postdoctoral experience desirable.

The appointee will be expected to teach courses in fisheries oceanography or in the ecology of marine nekton, to supervise graduate students, and to develop a program of grant-funded research. Salary: \$27,000 to \$35,000, negotiable. Application material, including a brief statement of research plans and the names of three references, should be submitted not later than 31 January 1984 to: **G. Ross Heath, Dean, College of Oceanography, Oregon State University, Corvallis, Oregon 97331. Affirmative Action/Equal Opportunity Employer.**

**OCEANOGRAPHIC MICROBIOLOGIST.** The College of Oceanography at Oregon State University has an assistant professorship position open for an oceanographic microbiologist. The appointee will be expected to develop a program of grant-funded research in the area of marine microbiology. Opportunities will be available for teaching of classes and seminars in marine microbiology and biological oceanography and for supervision of graduate students. Candidates should hold a Ph.D. in biological oceanography, microbiology, or related discipline, and have postdoctoral research experience specifically with marine microbes. Salary: \$27,000 to \$35,000, negotiable. Submit résumé and names of three references before 15 January 1984 to: **Dr. G. Ross Heath, Dean, College of Oceanography, Oregon State University, Corvallis, Oregon 97331. Affirmative Action/Equal Opportunity Employer.**

**SENIOR RESEARCH SCIENTIST**

**Fungal Physiology**

The Rohm and Haas Company, a leading multinational chemical company, has an opening for a Senior Research Scientist at our corporate research headquarters located in Spring House, PA, an attractive suburb of Philadelphia.

Your major responsibility will be to conduct basic studies in fungal physiology/biochemistry on economically important plant pathogens in order to identify physiological processes and metabolic pathways susceptible to attack by toxicants.

You will work with synthesis groups to develop information relating to mechanism of action, binding, inhibition, transport and metabolism of experimental agricultural fungicide compounds and define their action on biological targets. You should be highly independent and skilled in physiological methodology, aspects of protein and organelle purification, kinetic and tracer techniques, and advanced bioanalytical methods. A Ph.D. in mycology, or fungal physiology/biochemistry is required with postdoctoral experience desirable.

We offer an excellent salary and benefits program, including relocation assistance, and an environment conducive to professional advancement. Please send a detailed resume, in confidence to:

Recruiting and Placement #3483

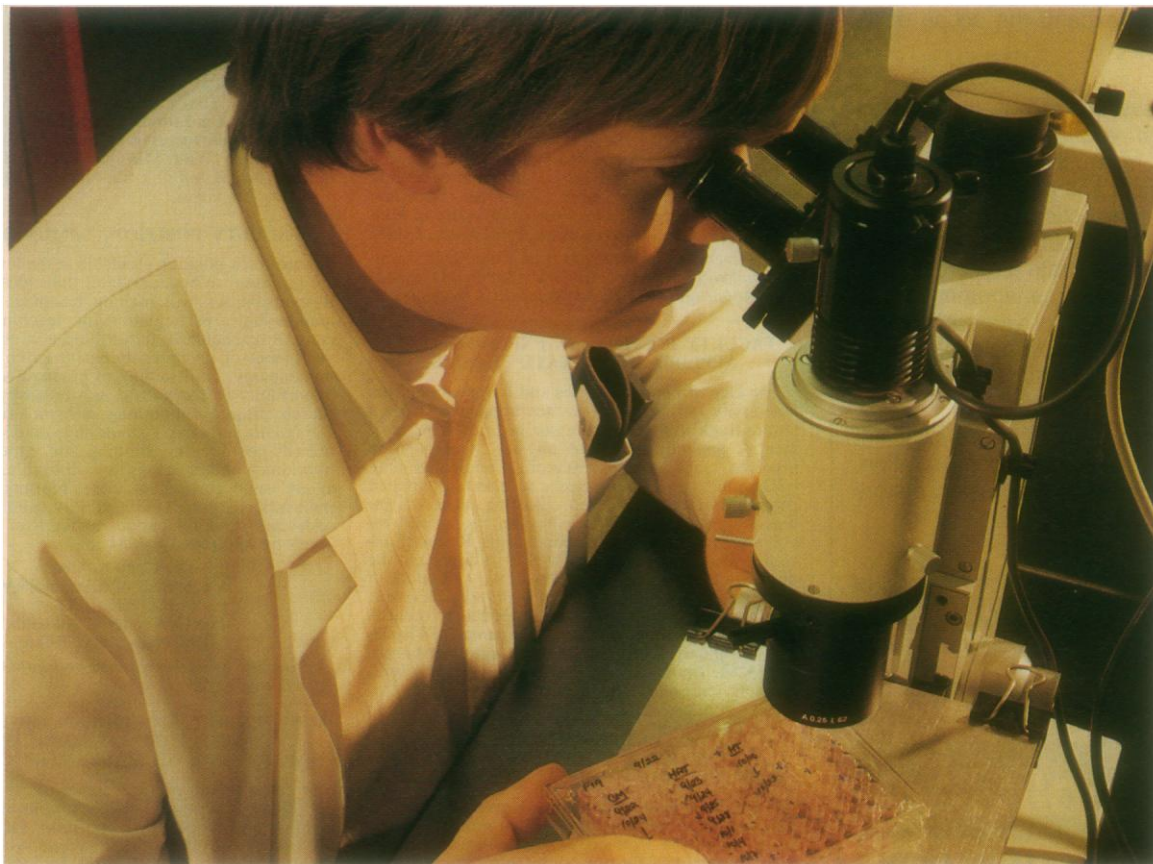


PHILADELPHIA, PA. 19105

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# Monsanto Company... creating the future



Monsanto Company has been developing a major thrust in biotechnology, including such fields as molecular biology, biocatalysis, fermentation, cell biology, and bioseparations. Efforts involve a significant commitment to the fundamental understanding of life processes, especially the genetics of higher organisms. Exploratory and applied research is directed to plant agriculture, animal nutrition and health, human health care and chemical processing.

At our World Headquarters, we have modern and well-equipped laboratories set in a campus-like environment in suburban St. Louis County. The research complex accommodates more than 1200 technical people representing a multi-disciplinary group of scientists in chemistry, molecular biology, cell biology, genetics, physics, microbiology and all aspects of applied and fundamental life sciences.

We are continuing to expand our efforts in biotechnology, and a new research center for biological sciences is being completed at Chesterfield Village, 10 miles west of our World

Headquarters. These facilities will house some 1000 scientists working on the development of new products based on the life sciences.

We have also established major joint research programs with Washington University in St. Louis as well as with other research universities, and our scientists and engineers form part of an exciting Industry/University scientific community. It is a demanding but stimulating intellectual environment.

Monsanto Company is an equal opportunity employer dedicated to the development of its human resources to their maximum abilities. We have a long-term commitment to biotechnology and to chemistry in the service of society. If you are interested in becoming a part of this commitment, write:

## Monsanto

800 N. Lindbergh  
Department 02G  
St. Louis, Mo. 63167

## DIRECTOR OF IMMUNOLOGICAL RESEARCH

ICL Scientific is a growing company involved in immunodiagnostics, and intends to expand the scope of its product line.

To achieve this growth, it seeks an individual who has the technical training, research experience, business insight and personal interest in immunodiagnostics. A Ph.D. or M.D. degree is required. Candidates should demonstrate a record of publications, group management capabilities and several years of experience directly translatable to the program of ICL Scientific.

The company provides an excellent benefits package. For consideration, send your resume with salary history in confidence to:



Janet Harris/Personnel Dept.  
ICL SCIENTIFIC  
18249 Euclid St.  
Fountain Valley, CA 92708

## RepliGen BIOTECHNOLOGY

Repligen Corporation, a rapidly growing biotechnology company involved in the development of a variety of innovative peptide and protein products, seeks qualified candidates at the B.S./M.S. level in the following areas:

**Organic Chemistry:** Position requires two years of synthetic experience and a strong interest in biotechnology. Experience with enzyme-assisted synthesis or peptide synthesis is desired.

**Biochemistry:** Position requires a minimum of two years of experience in protein chemistry with emphasis on analytical techniques including immunochemistry.

**Successful candidates will be highly motivated individuals who can take advantage of the outstanding growth opportunities at Repligen. Repligen offers a competitive salary, excellent benefits, and equity participation. Submit resume and references to: Director of Personnel, Repligen Corporation, 101 Binney Street, Cambridge, MA 02142.**

An equal opportunity employer.

## POSITIONS OPEN

### FACULTY POSITIONS IN BIOCHEMISTRY/MOLECULAR BIOLOGY

The Department of Biochemistry, College of Biological Sciences, University of Minnesota, invites applications for two positions. One will be a tenure-track position at the assistant professor level; the other position may be at any academic level and could be tenure-track or tenured. Candidates must have postdoctoral experience, a strong record of research productivity, and will be expected to establish an externally funded research program in some biochemical aspect of molecular biology, preferably eukaryotic. Teaching responsibilities include basic biochemistry and an advanced course in the applicant's field of interest. The appointments will begin September 1984. Deadline for receipt of applications is 15 January 1984. Send curriculum vitae, list of publications, and a one-page statement of research interests, and have three letters of recommendation sent to: **Biochemistry Search Committee, Attention: DR, Department of Biochemistry, University of Minnesota, 1479 Gortner Avenue, St. Paul, Minn. 55108.**

*The University of Minnesota is an Equal Opportunity Employer and educator and specifically invites and encourages women and minorities to apply.*

### FACULTY POSITION IN EXPERIMENTAL APPLIED SOLID-STATE PHYSICS

The Department of Physics and Astronomy of the University of Pittsburgh invites applications for a tenure-track assistant professor position in experimental, applied solid-state physics. The position involves teaching and research. Candidates with backgrounds in materials-related areas of applied physics will be considered. Existing programs include semiconductor materials, ion beams and involve university-industry cooperation. Research includes the study of quantum-well structures and the physics of novel semiconductor devices. Letters of application, résumés, statements of research plans, and the names of three professional references should be sent to: **Chairman, Department of Physics and Astronomy, University of Pittsburgh, Pittsburgh, Pa. 15260.** *The University of Pittsburgh is an Affirmative Action/Equal Opportunity Employer.*

### FACULTY POSITION FOR PHYSICIAN IN OCCUPATIONAL MEDICINE/OCCUPATIONAL EPIDEMIOLOGY

Tenure-track faculty position available in the Department of Community and Environmental Medicine, California College of Medicine, and in the University of California Southern Occupational Health Center at the University of California, Irvine. Qualifications should include eligibility for medical licensure in California and certification by the Board of Preventive Medicine. Experience should include research productivity in an area relevant to occupational medicine, preferably emphasizing epidemiologic methods. Experience in instruction of medical students and occupational medicine residents is highly desirable. Responsibilities will include continued development of existing occupational medicine residency program, medical student instruction in occupational medicine, and development of a research program relevant to occupational medicine. Send curriculum vitae, statement of current research support, and names of three references to:

**James L. Whittenberger, M.D.**  
Professor and Chair  
Department of Community and  
Environmental Medicine  
College of Medicine  
University of California, Irvine  
Irvine, California 92717

*An Affirmative Action/Equal Opportunity Employer*

### POSITION IN HUMAN ANATOMY

Applications are invited for a faculty position in the Department of Human Anatomy. Ability to establish an independent research program and attract extramural funding in the area of cellular biology essential. Primary teaching responsibilities will be in microscopic anatomy. One or two years of postdoctoral experience required. Appointment at the assistant professor level. Send complete curriculum vitae, including a statement of research interests and five letters of reference, to: **Dr. Barry F. King, Search Committee Chair, Human Anatomy, School of Medicine, University of California, Davis, Calif. 95616.** Application deadline is 31 December 1983. Only complete applications will be considered.

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

## POSITIONS OPEN

### FACULTY POSITION, ASSISTANT PROFESSOR

The Department of Pathology, Indiana University School of Medicine, is seeking an assistant professor to participate in its teaching and research activities in molecular pathobiology of infectious diseases. Applicants with a Ph.D. or M.D. and postdoctoral experience with nucleic acid hybridization techniques and a working knowledge of DNA sequencing methodology will be given preference. Requirements include diagnostic training in clinical microbiology, research training in molecular biology, a willingness to maintain an active research program with opportunities for training of graduate students and fellows, and a willingness to collaborate with other faculty. Send curriculum vitae and three references to: **Dr. Carleton D. Nordschow, Chairman and Professor, Department of Pathology, N440 University Hospital, 926 West Michigan Street, Indianapolis, Indiana 46223.** *Indiana University is an Equal Opportunity Employer.*

### FACULTY POSITION, IMMUNOLOGIST

Tenure-track position available at the level of assistant professor to begin no later than 16 August 1984. Responsibilities will include teaching a course in immunology, participation in teaching of other courses (particularly pathogenic microbiology), development of an independent research program in immunology, and training of graduate students. An opportunity to participate in a federally funded research project concerning immunomodulation by *Bordetella pertussis* vaccine is available. Ph.D. required; postdoctoral training and experience with hybridoma methodology are desirable. Applicants should send curriculum vitae, reprints of relevant publications, date of availability, and the names, addresses, and telephone numbers of three references by 15 February 1984 to:

**Dr. Gary L. Sloan**  
Department of Microbiology  
P.O. Box BM  
The University of Alabama  
University, Ala. 35486

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

### IGNEOUS/METAMORPHIC PETROLOGIST or STRUCTURAL GEOLOGIST HOBART AND WILLIAM SMITH COLLEGES

The Department of Geoscience of these private, coordinate, liberal arts colleges seeks applicants for a full-time, tenure-track position for September 1984. We need a field-oriented igneous or metamorphic petrologist or structural geologist, a person committed to excellence in teaching and to stimulation of undergraduate research. Ph.D. required and teaching experience desirable. Teaching includes introductory courses, mineralogy, petrology and structure plus participation in the Colleges' general curriculum. Research encouraged and supported. Submit curriculum vitae and three letters of recommendation to: **Donald L. Woodrow, Department of Geoscience, Hobart and William Smith Colleges, Geneva, N.Y. 14456.** *Applications from women and members of minority groups encouraged.*

Position available—**IMMUNOLOGIST.** The Department of Microbiology and Immunology and the Cancer Research Center, University of North Carolina (UNC), School of Medicine, Chapel Hill, invite applications for an **assistant professorship in immunology.** We seek an individual with an interest in teaching immunology to graduate and medical students, and demonstrably capable of conducting an independent research program in genetic and/or molecular aspects of the immune response. Position available summer 1984. *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer. We encourage applications from and nominations of minority and female candidates; such persons may identify themselves voluntarily.* Reply by 15 December 1983, with curriculum vitae and names and addresses of references to: **Jeffrey A. Frelinger, Ph.D., 804 Faculty Laboratory Building, UNC, Chapel Hill, N.C. 27514.**

**IMMUNOLOGY RESEARCH POSITION.** Position available 1 July 1984 in postdoctoral series for Ph.D. to conduct basic and clinically oriented research related to the mucosal immune system, immunoregulation, oral vaccines, and autoimmunity. Strong background in cellular immunology, immunogenetics, molecular biology, or protein chemistry preferred. Please send résumé and three academic references to: **Dr. Martin Kagnoff, Department of Medicine, M-023-D, University of California, San Diego, La Jolla, Calif. 92093.**

# MOLECULAR BIOLOGY, CELL BIOLOGY, AND BIOPOLYMER CHEMISTRY RESEARCH

Continuing its commitment to a strong research organization, The Upjohn Company (a leader in worldwide research, marketing, and production of pharmaceuticals, chemicals, and agricultural products) is significantly expanding its existing biotechnology effort. Approximately 75 additional persons will be hired during the next two years in order to assure state-of-the-art capabilities in this area.

The group being assembled is a core research and development support group which is comprehensive in its coverage of biotechnology areas, and which develops techniques and undertakes state-of-the-art **basic and applied** studies.

Comprised of Molecular Biology, Cell Biology, and Biopolymer Chemistry research, the Biotechnology group is responsible for developing each of the basic techniques in these areas, and making these techniques and efforts available to groups in Pharmaceutical, Agricultural, Fermentation and Diagnostics research. By maintaining and applying an in-depth understanding of molecular biology, protein and peptide chemistry, cell biology, recombinant DNA, and hybridoma technology, this group supports both product lead-finding and development.

Job opportunities exist in each of the biotechnology areas for Ph.D. Scientists and for BS and MS degreed Assistants. The Scientist positions require postdoctoral experience and good potential for developing an outstanding research program, including a significant publication record. The Assistant positions require research experience and a demonstrated ability to work independently. For each specific opening listed below, the parentheses indicate at which education level Upjohn is recruiting.

## MOLECULAR BIOLOGY (#1000)

The Molecular Biology Section develops techniques for identification, cloning, and expression of genes of interest to therapeutics, agriculture, fermentation and diagnostics programs. This involves development of vectors for expression of cloned genes in E. coli, yeast, gram-positive organisms, mammalian cells and plants, as well as basic research in each of these areas. Candidates with qualifications and experience in the following research areas are encouraged to apply:

- gene expression - E. coli (Ph.D./BS/MS)
- gene expression - Yeast (Ph.D./BS/MS)
- gene expression - Gram positive microorganisms (Ph.D./BS/MS)
- gene expression - Mammalian (Ph.D./BS/MS)
- gene isolation and gene identification (Ph.D./BS/MS)
- plant molecular biology (BS/MS)

## CELL BIOLOGY (#2000)

The Cell Biology Section establishes research efforts in several areas of cell biology, including hybridoma technology, receptor isolation, purification and characterization, membranes, and cell-cell communication. This group will serve as a core resource within Upjohn and will investigate the basic mechanisms and processes involved in the above areas, and aid in the transfer of these technologies to other Upjohn departments. Currently we are seeking candidates with research experience in the following areas:

- cell receptors (Ph.D.)
- membrane transport (Ph.D.)
- hybridomas (Ph.D.)
- cell-cell communication (Ph.D.)
- cellular differentiation (Ph.D.)
- cellular microinjection (Ph.D.)

## BIOPOLYMER CHEMISTRY (#3000)

The Biopolymer Chemistry Section is responsible for the chemical synthesis of peptides and oligonucleotides, plus the isolation, purification and characterization of proteins. Additionally, it has responsibility to carry out basic research in the above fields. Candidates with qualifications and experience in the following research areas are encouraged to apply:

- protein sequencing (Ph.D./BS/MS)
- protein isolation and purification (Ph.D./BS/MS)
- peptide chemistry (BS/MS)
- oligonucleotide chemistry (BS/MS)

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

For confidential consideration, please call, toll free, Upjohn's Corporate Employment Office at **1-800-253-8600** and ask for extension **3-6767**. In Michigan call collect: **616/323-6767**. When calling, please refer to the ad # of the specific Biotechnology area of interest to you and state your degree level (Ph.D., MS or BS).



**A Century of Caring**  
"An Equal Opportunity Employer"



**INSTITUTE OF COGNITIVE SCIENCE  
UNIVERSITY OF COLORADO, BOULDER**

**Positions in Artificial Intelligence**

The Institute of Cognitive Science has two tenure track positions in the area of artificial intelligence that begin September 1, 1984. The first position is open with respect to rank and salary, the second is a beginning assistant professor level tenure track position. We seek individuals in any area of artificial intelligence but will give preference to individuals who are interested in interacting with the cognitive psychologists and linguists at the Institute. We would be interested in receiving applications from senior individuals who will have the opportunity to become the Director of the Institute in the next two to five years.

The Institute and the Psychology Department share a VAX 11/780 and will have three Xerox LISP machines. We view these two positions as forming the nucleus of a new group of members to the Institute. In future years we will have positions open in Psychology, Linguistics, and an additional position in the area of artificial intelligence.

Applicants should send a vita, names of at least three references, a statement of research interests in the areas of artificial intelligence and cognitive science, and a statement of teaching interests. This material should be sent to Professor Peter G. Polson, Institute of Cognitive Science, Campus Box 345, University of Colorado, Boulder, Colorado 80309. This position can be filled after February 1, 1984. Inquiries about these positions can be directed to Peter Polson (POLSON@SUMEX-AIM, (303) 492-6991) or Professor Walter Kintsch, Director of the Institute (KINTSCH@SUMEX-AIM, (303) 492-8086). The University of Colorado is an Affirmative Action/Equal Opportunity Employer.

**MICROBIAL  
GENETICISTS**

**MICROBIOLOGISTS**

**MOLECULAR  
BIOLOGISTS**

**FERMENTATION  
ENGINEERS**

**IMMUNOLOGISTS**

**PROTEIN CHEMISTS**

Synergen has positions for talented and energetic scientists. If you are interested in biotechnology done to the highest scientific standards, please send a CV, including the names of three references to:

Personnel  
Synergen, Inc.  
1885 33rd Street  
Boulder, Colorado 80301



**POSITIONS OPEN**

**THE UNIVERSITY OF ASTON  
IN BIRMINGHAM  
FACULTY OF LIFE AND  
HEALTH SCIENCES  
New Blood Lectureship**

Applications are invited for a lectureship in toxicology in the DEPARTMENT OF PHARMACY which has been funded by the University Grants Committee as part of its 'New Blood' initiative. We seek to attract a person of exceptional promise, at present working in any of the basic sciences, but motivated to make an original contribution within the general area of drug toxicity.

The successful candidate will be expected to devote most of his/her time to research within the framework of the newly created Medical Research Council "Mechanisms of Drug Toxicity Group." Opportunity also exists for creative collaboration with personnel in the Cancer Research Campaign funded Experimental Cancer Chemotherapy Group and the Industrial Toxicology Research Group; these groups receive recurrent external funding in excess of £400,000 (\$600,000) per annum. Excellent technical support and research facilities are available including the use of 3000 square feet of new laboratories opened this year.

Appointments will be for a period of 3 years initially, with the possibility of renewal or subsequent transfer to a continuing appointment. Initial salary will be within and up to the maximum of the range £7,190 to £14,125 per annum.

Application forms and further particulars may be obtained from: **The Staff Officer (quoting reference: 571/95), University of Aston in Birmingham, Gosta Green, Birmingham B4 7ET, England. Telephone: 021 359 3611, extension 4564.** Closing date for the receipt of applications is 16 December 1983.

**LIMNOLOGIST**

The Biology Department of Montana State University (MSU) seeks a limnologist with research strengths in aquatic primary productivity. This will be a tenure-track, academic year position. Teaching responsibilities will include an undergraduate course on freshwater algae and macrophytes, and graduate courses in basic and applied limnology. The successful applicant will be expected to develop a strong program of research on ecology of surface waters, including those of Montana and vicinity, with special emphasis on chemical, physical, and biological interactions at the primary producer level. Ph.D. or equivalent degree is required; the appointment is expected to be as assistant professor. Anticipated starting date is 1 September 1984. Interested persons should submit applications with curriculum vitae and the names of three references to: **Limnologist Search Committee, Biology Department, Montana State University, Bozeman, Montana 59717.** An expanded position description is available from the committee. Application deadline is 1 February 1984. *MSU is an Equal Opportunity/Affirmative Action Employer.*

**NEUROBIOLOGY FACULTY**

Applications are invited for a tenure-track position at the assistant professor level in the Department of Cell Biology available 1 September 1984. Applicants should have a Ph.D. degree and postdoctoral research experience in neurobiology. Preferred areas of research expertise should focus on cellular or molecular issues in neurobiology. A strong commitment to medical and graduate teaching in the neurosciences is expected. Applicants should send curriculum vitae, statement of research interest, and the names of three references by 15 January 1984 to: **Neurobiology Search Committee, Department of Cell Biology, The University of Texas Health Science Center, Dallas, Texas 75235.** *Equal Opportunity/Affirmative Action Employer.*

**PHYSIOLOGIST.** Georgia College is inviting applications for a tenure-track assistant professor beginning September 1984. A Ph.D. and research experience in some aspect of vertebrate physiology are required and postdoctoral and/or teaching experience are desirable. The candidate will be expected to teach vertebrate, comparative, human, and cell physiology as well as participate in the freshman and M.S. programs. Send curriculum vitae, description of research interests, transcripts, and three letter of reference by 15 January 1984 to: **Dr. William P. Wall, Search Committee Chairman, Department of Biological and Environmental Sciences, Georgia College, Milledgeville, Georgia 31061.** *An Equal Opportunity/Affirmative Action Employer.*

**POSITIONS OPEN**

**MARINE RESEARCH SCIENTIST  
(Assistant Professor, Nontenure Track)**

The West Indies Laboratory of Fairleigh Dickinson University which operates the scientific saturation diving facility, Hydrolab, as part of NOAA's National Undersea Research Program is seeking a research scientist. Applicants must be experienced in field marine research using diving techniques, with an excellent publication record, and be interested in the application of saturation diving techniques to research. The successful candidate will be expected to develop a research program using Hydrolab, act as a scientific coordinator for all Hydrolab users, act as liaison with NOAA scientific staff, and teach several short courses at West Indies Laboratory. A major responsibility will be to help develop a long-term marine science program for the Caribbean in conjunction with planned new diving facilities and use of submersibles.

Appointment will be for 1 year, starting immediately, with possibility of reappointment. Send letter of application, curriculum vitae, and names, addresses, and telephone numbers of three references by 15 December 1983 to: **Dr. John C. Oden, Director, West Indies Laboratory, Fairleigh Dickinson University, Teague Bay, Christiansted, St. Croix, U.S. Virgin Islands 00820.**

The University of California at Davis is seeking a full-time organic-analytical assistant research MASS SPECTROMETRIST for the central instrumentation facility. Applicants must be proficient in mass spectrometry with a Ph.D. in an applicable science or an equivalent combination of education and experience. The incumbent will be responsible for the operation and maintenance of a state-of-the-art medium resolution GC/MS with EI, CI, and FAB. He/she will collaborate in research projects with University staff and aid in the interpretation of data and assist campus researchers in the use of mass spectrometry. The ability to interact well with researchers in various subdisciplines of chemistry and the biological sciences is essential. This is a permanent, nontenure-track research position with a salary range of \$22,900 to \$30,100 (range adjustment due in 1983-1984), commensurate with experience. Send résumés and references before 6 January 1984 to:

**J. Pangborn, Director  
Facility for Advanced Instrumentation  
9-Hutchinson Hall  
University of California  
Davis, California 95616**

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

**METABOLIC CHEMIST**

Hazleton Laboratories America, Inc., located in Madison, Wisconsin, has an opportunity for an experienced metabolic chemist. The successful candidate for this position will be responsible for developing and implementing studies involving absorption, distribution, metabolism, and excretion of pharmaceuticals and agri-chemicals and their metabolites. Additional responsibilities include the development and implementation of pharmacokinetic analysis and significant client interaction. Minimal requirements for the position include a Ph.D. in pharmacology, biopharmaceutics, or medicinal chemistry with extensive training in drug metabolism and disposition. Experience in bioanalytical methodology is essential; working knowledge of pharmacokinetics is a plus. Submit résumé to: **The Personnel Manager, Hazleton Laboratories America, Inc., P.O. Box 7545, Madison, Wisconsin 53707.**

*An Equal Opportunity Employer*

**POPULATION BIOLOGY/GENETICS.** Seeking individual whose work deals with genetic structure and processes in natural populations of organisms to fill tenure-track position at assistant professor level, beginning August 1984. Applicants should hold a Ph.D. and have demonstrated excellence in both teaching and research; postdoctoral experience desirable. Will be expected to interact with diverse group of active individuals in related disciplines. Applications, including letter describing research and teaching interests and professional goals, current résumé, and reprints/preprints of publications, by 1 January 1984 to: **Chairman, Population Biology/Genetics Search Committee, Biology Department, University of New Mexico, Albuquerque, N.M. 87131.** Applicants should arrange to have three letters of reference sent separately. *Affirmative Action/Equal Opportunity Employer.*

# **HEAD-ANTIMICROBIAL RESEARCH**

**for**

## **Growing Sunbelt Pharmaceutical Company**

Recently, our company has decided to invest in the search for and development of novel antimicrobial product candidates. This has created an immediate need for an experienced research manager to provide "hands-on" scientific and administrative guidance to our programs. The objectives are both intermediate and long-range in nature and will be diverse in scope to include both ethical and O.T.C. product development.

*Our minimum candidate requirements include:*

- Ph.D. in Microbiology or related science.
- Ten years of applied research experience to have included at least three years program management. Pharmaceutical experience with I.N.D. candidates preferred.
- Proven skills in providing program direction with a strong commitment to scientific excellence coupled with the ability to "sell" program plans to top research and corporate business executives.
- Good negotiation and communication skills.
- Must be available to travel up to 25% annually.

If you have been considering a career change to a more dynamic environment where you can provide professional leadership with high visibility--this may be the opportunity.

To indicate your interest, please send your detailed C.V. in absolute confidence to:

**Box 317, SCIENCE**

## FACULTY APPOINTMENTS IN MOLECULAR BIOLOGY

The E. A. Doisy Department of Biochemistry at St. Louis University School of Medicine intends to develop a center of excellence in Molecular Biology with at least six tenure-track faculty appointments in this area over the next three years. At least one appointment will be at the Associate or Full Professor level. This represents a major expansion of the interdisciplinary, multidepartment Cell and Molecular Biology program at St. Louis University School of Medicine. Applicants should be capable of developing a strong, independent research program employing molecular biological, genetic, and/or biophysical approaches to address fundamental biological questions, and/or studies of the molecular bases of human disease. Excellent start-up funds and salary are available. Send curriculum vitae, description of research plans, and names of three references to:

**Dr. William S. Sly**  
Chairman  
Department of Biochemistry  
St. Louis University School of  
Medicine  
St. Louis, Missouri 63104

## ASSISTANT PROFESSOR, BIOCHEMISTRY COLLEGE OF MEDICINE— URBANA/CHAMPAIGN

The Department of Biochemistry at the University of Illinois at Urbana-Champaign invites applications for a tenure-track position available in the fall of 1984. Although outstanding applicants with research interests in any area of biochemistry will be considered, preference will be given to applicants whose interests lie in the areas of eucaryotic molecular genetics or medically related biochemistry. Candidates must have demonstrated exceptional research ability and, in addition, be prepared to establish an outstanding research program and to contribute to medical, undergraduate, and graduate teaching programs. Salary negotiable, commensurate with experience. A doctoral degree and postdoctoral experience in biochemistry or a relevant related area is required. For full consideration, candidates should submit a curriculum vitae including a brief summary of their research interests and three letters of reference by January 15, 1984 to:

**The Biochemistry Search Committee**  
Department of Biochemistry  
University of Illinois  
1209 West California Street  
Urbana, Illinois 61801  
(217) 333-2013

*The University of Illinois is an Affirmative Action—Equal Opportunity Employer*

## POSITIONS OPEN

**MARINE RESEARCH ASSOCIATE III:** A postdoctoral research associate position is available starting 1 January 1984 for studies of the western Sargasso Sea from the subtropical convergence to the Gulf Stream. The research involves the processing and analysis of satellite thermal IR digital data. The primary scientific emphasis will be on mesoscale near surface dynamics and on air/sea interaction in the region and will be coupled to in situ data from several on-going projects. Facilities include dedicated VAX 11/750 image processing system with large historical digital data base and extensive data acquisition program of the Sargasso Sea. Submit résumé and three professional references by 15 December 1983 to: **Peter Cornillon, Marine Research Associate III Position, UNIVERSITY OF RHODE ISLAND, P.O. Box 357, Kingston, R.I. 02881-0357. Affirmative Action/Equal Opportunity Employer, MIF.**

**MOLECULAR GENETICS.** The University of Illinois announces the current availability of two tenured or tenure-track positions at the assistant or associate professor level in the Department of Veterinary Pathobiology. Qualified individuals are expected to have a Ph.D. or equivalent, and clear evidence of research capability in one of the areas of eukaryotic, viral, or bacterial molecular genetics with an interest and commitment to problems of importance in veterinary medicine. In addition to developing an active, independent, and collaborative research program, duties will include teaching veterinary and graduate students in an area of microbiology and guiding graduate student research. Salary is competitive and negotiable based on experience and qualifications. Applications will be accepted until 15 March 1984, or until acceptable candidates are identified. Send résumé and three letters of reference to: **Dr. Wayne A. Tompkins, Department of Veterinary Pathobiology, College of Veterinary Medicine, University of Illinois, 2001 South Lincoln Avenue, Urbana, Ill. 61801, telephone: 217-333-7825.** Starting date: as soon as possible after 15 March 1984.

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

**PHYSIOLOGIST.** Ohio University has an opening for a full-time, tenure-track faculty member in the College of Osteopathic Medicine and the Department of Zoological and Biomedical Sciences. A broadly trained physiologist is sought at the assistant or associate professor level who will be an effective teacher of renal physiology to osteopathic medical students in an integrated, systems curriculum and who will participate in the teaching of undergraduate and/or graduate students in the Physiology/Pharmacology program of the department. With the aid of start-up funds provided by the University, the successful candidate is expected to develop a research program that is capable of competing successfully for extramural support. Collaborative opportunities are available in a variety of areas including exercise physiology, neurophysiology, muscle biology, ultrastructure, endocrinology, biochemical pharmacology, and recombinant genetics. The University, with a student body of 14,500, is located in a small, picturesque, university town in the hills of rural, southeastern Ohio. Salaries are competitive and the cost of living, including housing, is moderate.

Letters of application, curriculum vitae, brief descriptions of proposed research, and three letters of recommendation must be received by 31 January 1984. Address to: **Dr. Ronald Portanova, Chairperson, Physiology Search Committee, College of Osteopathic Medicine, Irvine Hall, Athens, Ohio 45701.** *Ohio University is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE** position is available immediately for the study of membrane carriers and pumps, especially in bacterial systems. Applications preferred from those with experience in either electrophysiology or biochemistry (with training in use of vesicular systems and techniques for reconstitution). Please forward curriculum vitae and names and references to: **Peter C. Maloney, Department of Physiology, The Johns Hopkins Medical School, Baltimore, Md. 21205.**

**POSTDOCTORAL FELLOW** with Ph.D. in biophysics, biochemistry, or cell biology to study the molecular mechanisms of membrane fusion using liposomes and isolated cellular membranes. Send curriculum vitae and the names and telephone numbers of three references by 23 December 1983 to: **Dr. N. Duzgunes, Cancer Research Institute, M-1282, University of California Medical Center, San Francisco, Calif. 94143.**

## POSITIONS OPEN

### MOLECULAR GENETICS POSITION

Applications and nominations are invited for a tenure-track faculty position at the level of **ASSISTANT PROFESSOR** in the general area of **molecular genetics of higher plants.**

Applicants must have a strong background in molecular biology and genetics, or related areas. Applicants with postdoctoral experience and expertise in transformation, gene cloning, sequencing, and related recombinant DNA technologies will be given preference. The individual will be expected to develop a unique and high quality research program to identify important **nuclear genes**, to characterize such genes, and to develop **DNA transformation** systems whereby such genes can be incorporated into plant hosts and expressed. This position will involve approximately 70 percent research and 30 percent instruction and is on a 12-month basis (1 month vacation). In addition, the individual will be expected to organize and teach a graduate level course in a specialized area of molecular genetics, and to participate in other teaching and training activities in the department.

Applications must be received by 15 January 1984. Send curriculum vitae, reprints of refereed publications, three references, and a summary of research and teaching experience to:

**Dr. John G. Scandalios, Head**  
Department of Genetics  
North Carolina State University  
P.O. Box 5487  
Raleigh, N.C. 27650

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

### University of California, Los Angeles (UCLA) Biology Department PLANT MOLECULAR BIOLOGIST

An off-campus postdoctoral research associate position is available through a cooperative agreement with UCLA and the Beltsville Agricultural Research Center, Beltsville, Maryland. Research will be carried out in Beltsville and involves the study of gene structure and expression in soybean. Send applications by 15 December to: **Dr. Lila Vodkin, Plant Genetics and Germ Plasm Institute, USDA/BARC, Beltsville, Md. 20705.**

*UCLA is an Equal Opportunity Employer.*

### PLANT PHYSIOLOGIST

The Department of Botany at the University of Wyoming invites applications at the rank of assistant professor in plant physiology. The position involves teaching at the undergraduate and graduate level and the development of a vigorous research program. The candidate must have a strong background in plant biochemistry together with an ability to relate molecular-cellular metabolism to whole plant responses. A Ph.D. degree is required and postdoctoral experience will be given preference. Salary will be commensurate with experience and qualifications. The appointment will begin 25 August 1984. Qualified individuals should send a statement of research interests, curriculum vitae, transcripts of academic records, and names of three references by 15 January 1984 to: **Professor William A. Reiners, Head, Department of Botany, The University of Wyoming, Laramie, Wyo. 82071.**

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

**POSTDOCTORAL ASSOCIATE** available 1 January 1984; screening will begin immediately. Position to work on a grant funded project examining the lipid content of oral mucosa and skin. Requires Ph.D. in biochemistry; experience in extraction and identification of lipids desirable. Salary will be consistent with NIH postdoctoral scale. Send curriculum vitae, official transcripts, and names of two references to: **Dr. Christopher A. Squier, Dows Institute for Dental Research, Dental Science Building, University of Iowa, Iowa City, Iowa 52242. Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITION IN MUCOSAL IMMUNOREGULATION** available immediately for Ph.D. or equivalent. The candidate should be interested in lymphocyte cloning, lymphokine analysis, and role of accessory cells in IgA responses and oral tolerance. Interested candidates should send curriculum vitae and three letters of reference to: **Dr. Jerry R. McGhee, Department of Microbiology, University of Alabama in Birmingham, Birmingham, Ala. 35294. An Equal Opportunity/Affirmative Action Employer.**



Cetus Corporation, a leader in biotechnology, offers the following career opportunities.

### **Sr. Scientist/Scientist**

Direct cell biology of cloned human proteins. Requires Ph.D. in Genetics, Immunology, Biology or related field; 5+ years' experience in cell biology, virology or immunology. Job #83064.

### **Sr. Scientist/Scientist**

Direct research program in gene expression of heterologous host systems. Requires Ph.D. in Molecular Biology, Biochemistry or Microbiology, 3-5 years' experience in gene cloning/nucleic acid enzymology. Job #83065.

### **Research Associate/ Post-Doctoral Fellow**

Duties include purification and biochemical characterization of native and cloned human proteins. Requires Ph.D. or M.S. plus 3-5 years' experience in protein isolation/micro-methodology. Job #83067.

For confidential consideration FOR THE ABOVE POSITIONS, please send your specifying job number to:

**Cetus Corporation**  
Box SE  
1400 Fifty-third Street  
Emeryville, CA 94608

### **Research Associate Cetus Madison**

Assist in research directed to the genetic modification of crop plants using recombinant DNA technology. Requires an M.S. or B.S. + 2 or more years' experience in Molecular Biology, Molecular Genetics, Microbiology or related field. Also must have a high degree of independence. Job #83145.

FOR THIS POSITION ONLY, please send your resume in confidence to:

**Cetus Madison**  
2208 Parview Road  
Middleton, WI 53562



An equal opportunity employer m/f/handicapped

## **RESEARCH SCIENTISTS/ ASSOCIATES**

AMGen, an established biotechnology company with a broad technological base, is seeking Research Scientists/Associates with experience in the following areas:

- *Pharmacologist*—Ph.D. with at least 4 years post-doctoral experience, preferably in the pharmaceutical industry, to work in a small but expanding group. The position is one involving pre-clinical assessment of several new peptide agents being developed for therapeutic use, and would involve close collaborations with pre-clinical and clinical investigators.
- *Protein Purification*—Ph.D. with several years post-doctoral experience, preferably in the pharmaceutical industry, to work in an expanding group developing new peptide therapeutic agents.
- *Protein Characterization/Structural Analysis*—Candidates for scientist position should possess a Ph.D. in relevant field with a strong background in protein microsequencing and peptide mapping together with complementary skills in protein purification and protein S.A.R. studies.

Candidates for an associate position should possess a M.S. or B.S. in Chemistry or Biochemistry. Experience with HPLC and amino acid analysis is desirable.

- *Molecular Biologist*—Research Associate with BA/BS or MS and experience in Molecular Biology, Microbiology, Bacterial Physiology or Genetics. Demonstrated experience in the physiology or genetics of *Pseudomonas* would be a strong plus.



**Personnel (GC)**  
**AMGen**  
1900 Oak Terrace Lane  
Thousand Oaks, CA 91320-1789

*Equal Opportunity Employer*

## POSTDOCTORAL RESEARCH AWARDS

### Sponsored by the BALLISTIC RESEARCH LABORATORY in association with THE NATIONAL RESEARCH COUNCIL

The National Research Council will make awards in April, July and November of 1984 under the Resident Associationship Program, which provides awardees with opportunities to conduct experimental and theoretical research as visiting scientists and engineers in the fields of

Applied Computer Sciences  
Applied Mathematics  
Probability Theory and Stochastic Processes  
Combustion Research  
Fluid Mechanics  
Continuum Mechanics  
Materials Sciences  
Nuclear and Radiation Physics  
Physical Chemistry  
Quantum Chemistry

in the Ballistic Research Laboratory complex located in the beautiful Chesapeake Bay country of Maryland, within easy driving distance of the metropolitan centers of Baltimore, Philadelphia, and Washington, D.C.

Some programs are open to senior investigators as well as recent doctorates. Most programs require U.S. citizenship.

Further details on research programs can be obtained from Dr. L. J. Puckett, (301) 278-6246, at the Ballistic Research Laboratory, Aberdeen Proving Ground, MD 21005.

For application materials and details on specific research opportunities, write promptly giving areas of interest to:

Associateship Office (JH-610-E-15)  
NATIONAL RESEARCH COUNCIL  
2101 Constitution Avenue, NW  
Washington, DC 20418

Postmark deadlines for application are January 15, April 15 and August 15, 1984, respectively.

## NATIONAL SCIENCE FOUNDATION

### Director Division of Social and Economic Science

The Directorate for Biological, Behavioral and Social Sciences is seeking qualified applicants for position of Director of Division responsible for funding research in areas of social and economic science. This Senior Executive Service position has a salary range of \$59,230 (ES-2) to \$63,800 (ES-4). Appointment will be on a career basis.

Qualification requirements include: 1) Ph.D. or equivalent professional experience in social and economic sciences; 2) substantial research experience and strong evidence of scholarship in social and economic science, including publication of research; 3) experience in the planning of diverse research programs in the fields of social and/or economic science; 4) demonstrated familiarity with relevant academic community and recognized professional standing in the social and economic science community; and 5) supervision and management of professional and support staff involved in diverse endeavors.

Applicants should contact Margaret Cademartori on (202) 357-7857 to request Announcement EPS 84-2S for complete qualification requirements and application procedures. Applications must be received by January 6, 1984.

*Equal Opportunity Employer*

## POSITIONS OPEN

### PLANT TISSUE CULTURE

Positions are available at the Tissue Culture Laboratory of a horticultural company in West Chicago, Illinois. The qualifications for the positions are: (i) Ph.D. in horticulture or related area with a strong background and interest in plant physiology; tissue, cell, and protoplast culture; and plant regeneration, (ii) B.S. or M.S. with interest in tissue culture. Send résumé to:

Dr. Irwin Chu  
George J. Ball, Inc.  
P.O. Box 335  
West Chicago, Ill. 60185

**POSTDOCTORAL FELLOW.** Position available immediately for a recent Ph.D. to study the pathway and enzymes of dolichyl phosphate biosynthesis in tumor cells. A background in organic chemistry and enzymology is desired. Salary: \$16,500. Send curriculum vitae and three letters of recommendation to: Dr. W. Lee Adair, Jr., Department of Biochemistry, University of South Florida Medical Center, 12901 North 30 Street, Tampa, Fla. 33612. *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL FELLOW**—To study the regulation of hematopoiesis and its derangement during leukemia progression. The work will focus on cellular sources and target specificities of hemopoietic growth factors. U.S. citizenship. Send résumé and three reference letters to: Dr. W. H. Dodge, Oncology Research Center, Bowman Gray School of Medicine, Winston-Salem, N.C. 27103. *An Equal Opportunity Employer.*

### POSTDOCTORAL POSITIONS— ATHEROSCLEROSIS RESEARCH

Two postdoctoral positions are available in the Section of Atherosclerosis Research. The research projects involve (i) isolation and characterization of monocyte chemotactic factors from atherosclerotic arteries; applicant for this position must have a strong background in biochemistry, cell biology and related techniques; and (ii) evaluation of the effects of fiber-optic lasers in removing atherosclerotic plaques in vitro. Applicant for this position should have background in ultrastructural morphology and interpretation. Starting stipend: \$17,600.

Applicants should submit curriculum vitae, bibliography, and three letters of reference to:

Ross G. Gerrity, Ph.D.  
Section of Atherosclerosis Research  
Division of Research  
Cleveland Clinic Foundation  
9500 Euclid Avenue  
Cleveland, Ohio 44106

**POSTDOCTORAL POSITIONS** available for research on the role of clathrin-coated membranes in intracellular membrane dynamics. Special projects involve studies on the in vitro and in vivo structure and assembly of the clathrin coat using protein chemistry, monoclonal and polyclonal antibodies, immunocytochemistry, and microinjection techniques. Send curriculum vitae with the names of three references to: Dr. James H. Keen, Fels Research Institute, Temple University School of Medicine, Philadelphia, Pa. 19140. *Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION IN MEMBRANE BIOCHEMISTRY** available immediately for ongoing studies analyzing the interactions of desmosomal proteins in the processes of desmosomal assembly, desmosome-cytoskeletal association and cell-cell adhesion. Candidates must be proficient at methods of protein biochemistry, and a knowledge of immunoanalytical methods would also be desirable. See [JCB 258, 2621 (1982)] and [J. Cell. Biochem. 20, 113 (1982)]. Please send curriculum vitae and three letters of reference to: Dr. Malcolm S. Steinberg, Department of Biology, Princeton University, Princeton, N.J. 08544. *An Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITION, BIOPHYSICS,** available early 1984 for theoretical studies of ion pores with goal of quantitatively correlating conductance and pore structure. Experience in membrane biophysics and computer programming required. Salary: \$14,000 to \$15,000. Send résumé and names of three references to: Professor Peter Jordan, Department of Chemistry, Brandeis University, Waltham, Mass. 02254. *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**POSTDOCTORAL POSITIONS** available immediately for study of the bioenergetics or molecular biology of extremely alkalophilic bacteria. Experience in enzyme purification/reconstitution or cloning is desirable. Please send curriculum vitae and names of three references to: Dr. Terry A. Krulwich, Department of Biochemistry, THE MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, N.Y. 10029. *An Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available immediately to work on the role of lipid peroxidation in clinically induced colon carcinogenesis. Experience in lipid biochemistry and gas chromatography desirable. Please send curriculum vitae and names of three references to: Dr. Gary Slater, Department of Surgery, THE MOUNT SINAI MEDICAL CENTER, 19 East 98 Street, New York, N.Y. 10029. *An Equal Opportunity Employer.*

**POSTDOCTORAL POSITIONS** available immediately for studies in various aspects of cancer research. The areas of investigation include studies on metabolic activation and detoxication of carcinogenic compounds, chemical and biological characterization of the involved enzymes, the molecular basis of chemical toxicity, interactions of heavy metals with DNA and chromatin, tumor-specific cytochromes, immunology and biochemistry of chromosomal proteins, including monoclonal antibodies, molecular carcinogenesis, growth factors, mechanisms of action of retinoids, cellular interactions and extracellular matrix, cell differentiation, DNA cloning, and transcription. Salary negotiable. Applicants should submit curriculum vitae and have three letters of recommendation sent to either: Dr. F. Peter Guengerich (Center in Environmental Toxicology), or Dr. Lubomir S. Hnilica (Cancer Center), Department of Biochemistry, Vanderbilt University School of Medicine, Nashville, Tenn. 37232. *An Affirmative Action/Equal Opportunity Employer*

**POSTDOCTORAL POSITIONS** (two) immediately available for study of mammalian cell-surface interactions, cell proliferation, and cell locomotion. Candidates must have a solid background in biology/biophysics; some experience in tissue culture is desirable. Salary: \$17,000. Send curriculum vitae, names of three references, and availability date to: Dr. Ivar Giaever, National Foundation for Cancer Research Regional Laboratory, CRD K-1, Room 3C36, P.O. Box 8, Schenectady, N.Y. 12301. *Equal Opportunity Employer, M/F*

**POSTDOCTORAL POSITION** available 1 January 1984 for individual with experience in neurochemical and neurosurgical techniques to study animal models of narcotic withdrawal. Salary: \$15,600 per year for 2 years. Send curriculum vitae and names of three references to: Dr. Jerry J. Buccafusco, Department of Pharmacology, Medical College of Georgia, Augusta, Ga. 30912. *Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available immediately for research involving patch clamp recording from vertebrate photoreceptors. Background in cellular physiology and/or membrane biophysics desirable. Position must be filled before 1 February 1984. Send curriculum vitae and names of three references to: Dr. Peter B. Detwiler, Department of Physiology and Biophysics, SJ-40, University of Washington, Seattle, Wash. 98195. *The University of Washington is an Equal Opportunity Employer.*

**POSTDOCTORAL RESEARCH,** beginning 1984. To study control of plasmid replication in yeast. Strong background in molecular biology required. Reply to: Dr. R. L. Seale, Division of Cellular Biology, Scripps Clinic and Research Foundation, La Jolla, Calif. 92037.

**POSTDOCTORAL RESEARCH ASSOCIATE—VIROLOGY.** The Department of Entomology, Texas A & M University, invites applications for a research position starting immediately. Applicants should have background in molecular biology or virology and will conduct research on the persistence and expression of baculovirus DNA genomes in permissive and non-permissive cells. Starting salary is \$20,000. For additional information, contact: Dr. Max D. Summers, Department of Entomology, Texas A & M University, College Station, Texas 77843. Send curriculum vitae, reprints, and names of three references.



**DEUTSCHES PRIMATENZENTRUM GMBH**  
Kellnerweg 4, D-3400 Göttingen  
Telefon 0551/3851-0

The German Primate Center is performing biologically and medically oriented research on and with nonhuman primates. Also it will keep and breed primates for other research institutions. The DPZ is in its construction phase now, it will be completed at the end of 1983.

The German Primate Center invites applications for a tenure-track position as

## **Molecular biologist (research assistant)**

in its Virology and Immunology Section. We are seeking an experienced molecular biologist capable of using recombinant DNA techniques to address important problems of virology and immunology. Candidates should be interested to cooperate in an existing research program but the development of independent research projects within the scope of the section is also encouraged. The laboratory offers excellent research facilities without teaching obligations. Applicants must have an M.D. or Ph.D. in an appropriate area of biology or biochemistry.

DPZ applies the rules of the German public service (BAT). Please send curriculum vitae, a statement of research interest and background, official undergraduate and graduate transcripts, list of reprints and preprints of published work and submitted manuscripts, and names of three references to:

**Deutsches Primatenzentrum GmbH**  
Kellnerweg 4  
D-3400 Göttingen  
West Germany

## **Senior Scientists Virology/ Immunochemistry**

Cambridge BioScience Corporation, a biotechnology company specializing in human immunodiagnosics and veterinary medicine offers exciting positions in its Hopkinton, Massachusetts research laboratories. We are seeking biomedical scientists with experience in:

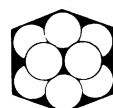
- Clinical and molecular virology
- Cell biology including tissue culture techniques
- Isolation, characterization and purification of viruses
- Protein chemistry purification and production of monoclonal antibodies
- Immunological techniques for virus detection and identification
- Handling of infectious agents
- Chemical modification of proteins and preparation of enzyme conjugates

The successful candidates will have a Ph.D. degree with at least two years post-doctoral or industrial experience in clinical or veterinary virology.

Cambridge BioScience offers a unique and stimulating research environment with a close working association with academic institutions through our Scientific Advisory Board. These are challenging opportunities for personal and financial growth.

Please send resume and salary requirements in confidence to:

**Dante J. Marciani, Director of Research**



**CAMBRIDGE BIOSCIENCE  
CORPORATION**

35 South Street, Hopkinton, MA 01748



## **RESEARCH AND DEVELOPMENT POSITIONS IN MICROBIOLOGY**

Difco Laboratories, a world leader in products for the microbiology and immunology laboratory since 1895, seeks talented and innovative individuals for positions in applied research. Successful applicants will occupy R&D facilities under construction in Ann Arbor, Michigan. Ann Arbor is a pleasant, culturally vibrant community and home of the highly rated University of Michigan.

Results oriented researchers with M.S. and Ph.D. levels of training are invited to apply. Expertise in a combination of the following areas is required: clinical microbiology, bacteriology, culture media, virology, cell culture, immunology

immunochemistry, hybridoma technology, polymer chemistry, plastics packaging and design, genetic engineering, instrumentation design and development, mycology and parasitology. Preference given to individuals with postgraduate experience and demonstrated accomplishments. Commercial experience desirable.

A curriculum vitae describing background, publications, notable accomplishments, and the names of three references should be submitted to:

**Ms L.M. Skrycki,**  
**Employee Relations Manager**  
**DIFCO LABORATORIES**  
P.O. Box 1058, Detroit, MI 48232

*Equal Employment Opportunity M / F*

**RESEARCH DIRECTOR  
U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF MINES  
TWIN CITIES RESEARCH CENTER  
TWIN CITIES, MINNESOTA**

Senior Executive Service.  
Salary range: \$59,230 to \$67,200 per annum.  
The Bureau of Mines, Twin Cities Research Center, is seeking a highly qualified scientist or engineer to serve as research director with responsibility for the direction, management, development, control, and coordination of the research programs at the Center. As a recognized research leader, scientist, technical expert, and specialist in mining research, the incumbent serves as a critical member of the mining research team and organization for the Bureau of Mines. He/she would be responsible for directing the development and formulation of mining research projects, plans, and programs. The research of the Center involves programs and projects of a highly complex nature relating to problem solution of long-term, high-risk health, safety, and mining technology research of the minerals industry.

Applicants must possess at a minimum, a bachelor's degree, preferably higher, in an appropriate physical science or engineering discipline from an accredited college. Applicants must also have a combination of education and experience which demonstrates the ability to provide leadership and direction for complex mining research programs of national scope and significance. In addition, applicants must have at least 3 years of progressively responsible experience in mining research, which demonstrates executive knowledge, ability, and managerial skills and practices. Further, the applicant should have been recognized in his/her field of endeavor as evidenced by publications, patents, awards, and other creative works. All interested applicants should contact the individual listed below to obtain the appropriate application materials.

Bureau of Mines, Division of Personnel, Branch of Employment, Fifth Floor 2401 E Street, NW, Washington, D.C. 20241, Attention: Judy Craney, Telephone: 202-634-4899.

U.S. CITIZENSHIP REQUIRED—CIVIL SERVICE STATUS NOT REQUIRED. *Equal Opportunity Employer.*

## POST-DOCTORAL INVESTIGATOR

Woods Hole Oceanographic Institution invites applications for the position of Post-Doctoral Investigator. Two positions are being offered for basic research in marine organic geochemistry. The first concerns research on sediment and seawater particulate matter from hydro-thermal vent systems. Importance of the micro-biological community in determining the organic chemical composition of particulate material will also be investigated. The second position is in the area of atmospheric transport of particulate organic material. Calculating the fluxes and determining the transformation reactions of this material will be undertaken. Preference will be given to applicants with training in organic chemistry, organic geochemistry, trace organic chemical analysis, chemical/micro-biological interactions, or mass spectrometry. Send resume and names of 3 referees to: Personnel Manager, Box 54P.



**WOODS HOLE  
OCEANOGRAPHIC  
INSTITUTION**

Woods Hole, MA 02543

THIS IS A TEMPORARY, FULL TIME POSITION FOR ONE YEAR WITH THE OPPORTUNITY FOR A SECOND YEAR APPOINTMENT.

An equal opportunity employer

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately for person interested in the effects of aging and nutrition on eye lens protein turnover. Primary focus is on the effects of aging on the catalytic competency of lens proteases. Both biochemical and physiologically oriented projects are planned. Candidates should have a Ph.D. in biochemistry and experience in metabolic studies, including protein turnover. This institute is a new state-of-the-art facility. Submit résumé, listing publications and relevant training (including grades), to:

Dr. Allen Taylor  
U.S. Department of Agriculture  
Human Nutrition Research Institute on Aging  
Tufts University  
711 Washington Street  
Boston, Mass. 02111

### POSTDOCTORAL RESEARCH ASSOCIATE

Available immediately to study fermentation/bio-conversion of algal biomass. Ph.D. in microbiology/fermentation or closely related areas. Knowledge of separation and identification techniques desirable. Send résumé and letters of reference to: Dr. Jim Nakas, College of Environmental Science and Forestry, Syracuse, N.Y. 13210.

### UNIVERSITY OF CALIFORNIA AT LOS ANGELES (UCLA) DEPARTMENT OF MEDICINE POSTDOCTORAL RESEARCH ASSOCIATE

A postdoctoral research position is available for a cellular biochemist to investigate protein inhibitors of phospholipase. Experience with prostaglandins, lipids, and high-pressure liquid chromatography is desired. The appointment will be for 1 to 2 years.

Send résumé and names of three references to: B. E. Brenner, M.D., Ph.D., Emergency Medicine Center, Department of Medicine, UCLA Medical Center, University of California, Los Angeles, Calif. 90024.

*Equal Opportunity/Affirmative Action Employer*

### TWO POSTDOCTORAL RESEARCH POSITIONS: AGING AND MUSCLE

To study: (i) changes in the metabolic rate of rats with age and diet, and (ii) molecular basis of passive tension in single muscle fibers, in collaboration with Dr. K. Wang, University of Texas, Austin. Ph.D. or equivalent required. Send curriculum vitae and names of three references to:

Dr. Roger McCarter  
Department of Physiology  
University of Texas Health Science Center  
San Antonio, Texas 78284

*An Equal Opportunity/Affirmative Action Employer*

**POSTDOCTORAL TRAINING IN THE NEUROSCIENCES.** Postdoctoral training positions are available in basic and clinical neuroscience including positron emission tomography studies of neurologic disease. Applicants must have the M.D. or Ph.D. degree and must be U.S. citizens, non-resident U.S. nationals, or have a permanent residence visa. Application deadline is 1 January 1984. Send curriculum vitae, three letters of recommendation, and a statement of research interests to: Sid Gilman, M.D., Professor and Chairman, Department of Neurology, The University of Michigan, 1103 East Huron, Ann Arbor, Mich. 48109, attention: Dr. George W. Dauth. *Equal Opportunity/Affirmative Action Employer.*

The Department of Psychology at the University of Illinois at Urbana-Champaign has a special position for a **FULL PROFESSOR** whose area of research falls within the general domain of **EXPERIMENTAL PSYCHOLOGY** in the broadest definition of the term. Candidates who are making noteworthy contributions to the study of cognition, memory, learning, perception, attention problem solving, psycholinguistics, or any other area in experimental psychology will be considered. For full consideration, applications must be received by 15 January 1984. Interviews will be conducted during the application period. The successful candidate can expect the department to assure adequate research facilities and some measure of continuing support. Salary will be negotiable. Proposed starting date is fall 1984. Applicants should contact: Dr. E. Donchin, Head, Department of Psychology, University of Illinois, 603 East Daniel, Champaign, Ill. 61820.

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

## POSITIONS OPEN

## Postdoctoral Researcher Molecular Biology

Genentech, Inc., a recognized leader in the field of biotechnology research, has an immediate challenging opportunity at the postdoctoral research level to be involved in the study of transcription and translation of heterologous genes in various systems. Successful candidate will have a Ph.D. in molecular biology and a strong record of accomplishment. Experience with transcription and translation of prokaryotic or eukaryotic organisms will be a plus. We invite applications from, and will give preference to, candidates who are available immediately.

Genentech, Inc., offers excellent compensation and a comprehensive benefits package in addition to a stimulating and professional team environment. For immediate consideration, send résumé along with three references to: **Human Resources, Department Number 344, Genentech, Inc., 460 Point San Bruno Boulevard, South San Francisco, Calif. 94080. Equal Opportunity Employer.**

### HARVARD SCHOOL OF PUBLIC HEALTH TAKEMI PROFESSOR OF INTERNATIONAL HEALTH

The Harvard School of Public Health is seeking the first incumbent for a new endowed chair, the Takemi Professor of International Health. The individual chosen will also serve as the first director of the Takemi Program in International Health and take responsibility for its research and fellowship activities. Candidates should be committed to research and teaching on policy issues concerning the allocation and management of resources for health purposes, especially in less developed countries, and to the study of health problems on an international and comparative basis. The search committee seeks persons with both research and managerial talents, and will place much weight on its judgment of future promise as well as past experience. Training and experience in the medical and the social sciences are especially relevant. *Women and minority candidates are particularly invited to apply.* Send résumé and the names of three references to: **Professor Frederick Mosteller, Chairman of Takemi Search Committee, Department of Health Policy and Management, 677 Huntington Avenue, Boston, Mass. 02115. Harvard University is an Affirmative Action/Equal Opportunity Employer.**

### VISITING PROFESSOR OF BIOLOGY

A one-semester appointment for spring 1984 to teach two courses, general biology (covering topics in biochemistry, cytology, genetics, microbiology, and immunology), and one of the following: cytology and histology, prokaryotic and viral genetics, microbiology, or developmental biology. Forward applications to: **Dr. Stuart Levine, Dean of the College, Bard College, Annandale-on-Hudson, N.Y. 12504, by 2 December 1983. An Equal Opportunity/Affirmative Action Employer.**

### RESEARCH ASSOCIATE IN PROTEIN CRYSTALLOGRAPHY

A position is currently available in the Biotechnology Group at the Stanford Synchrotron Radiation Laboratory (SSRL) for a protein crystallographer with Ph.D. and several years of research experience. The candidate should be experienced in both electronics and software development and should have a strong crystallographic background. The successful candidate will take part in the further development and use of an area detector data acquisition system that is being used in an experimental program to determine protein crystallographic phases using differences in the anomalous scattering at multiple x-ray wavelengths. The successful candidate will also interact with visiting research groups using: (i) the area detector facility, (ii) a rotation camera facility which will shortly be completed, and (iii) a CAD-4 diffractometer system. There will be an opportunity for both personal and collaborative research in the field of crystallography. The level of appointment and salary (from \$25,000) will depend on experience. The initial appointment is for 3 years and may be renewed. Please send curriculum vitae, a list of publications, and the names of three referees to: **Dr. Paul Phizackerley, SSRL, SLAC, P.O. Box 4349, Bin 69, Stanford University, Stanford, California 94305. Stanford University is an Equal Opportunity Employer.**



NATIONAL INSTITUTES OF HEALTH  
National Institute of Environmental Health Sciences  
Laboratory of Pulmonary Function and Toxicology

**Staff Fellow (Ph.D.)**  
**Salary Range—\$17,000 to \$34,269**  
**(Having less than 3 years professional Research Experience)**

**Senior Staff Fellow (Ph.D.)**  
**Salary Range—\$20,688 to \$38,422**  
**(3-7 years Research Experience)**

Research is being conducted in the Environmental Carcinogenesis Group on the cellular and molecular mechanisms of carcinogen-induced neoplastic progression in epithelial cells using quantitative *in vivo* and cell culture models. Projects will involve studies of the evolution and progression of transformed phenotypes, their biochemical characterization, and the modulation of neoplastic progression. Experience in mammalian cell genetics, biochemical genetics, developmental biology, tissue culture, the study of regulation of cell growth and differentiation and of neoplastic transformation is highly desirable. The candidate must have a record of demonstrated research productivity and the ability to carry out independent as well as collaborative research. Previous postdoctoral experience desirable but not required. The initial appointment is for two years, with additional extension possible for talented researcher. Salary commensurate with candidate's qualifications and experience. Send curriculum vitae, bibliography and three recommendation letters to:

**Mr. Bruce Wiggins, Code: HN-V28**  
**NIEHS Personnel Office**

**P.O. Box 12233 (MD 1-01), Research Triangle Park, NC 27709**  
**(919-541-3317)**

NIH is an Equal Opportunity Employer; women and minorities are encouraged to apply.

## Senior Molecular Geneticist and Cell Biologist

Eli Lilly and Company, a world leader in pharmaceutical and agricultural research, is seeking applicants for a Senior (Ph.D.) level position in the Division of Molecular and Cell Biology. Candidates for this senior position should have extensive knowledge and experience in mammalian cell genetics, recombinant DNA technology and eukaryotic expression vector development. The successful applicant will have at least one year of relevant post-doctoral work. The Senior Molecular Geneticist will conduct fundamental studies on heterologous and homologous gene expression in mammalian cells. Tissue culture experience that includes knowledge of mass cell culture techniques would be a definite asset. Please send curriculum vitae to:

**John W. Crooks, Manager**  
**College Relations (LRL)**  
**Eli Lilly and Company**  
**307 East McCarty Street**  
**Indianapolis, Indiana 46285**

## Associate Molecular and Cell Biologist

The BS/MS level scientist will work with a Senior Scientist on pharmaceutical and agricultural applications of molecular biology. Individuals with extensive mass cell culture experience are preferred. Associate Scientists, lacking mass cell culture experience, but having a good background in mammalian cell culture and genetics or molecular biology will also be considered for this position. Please send curriculum vitae to:

**Ms. Beth Marshall, Personnel Representative**  
**Lilly Research Laboratories**  
**307 East McCarty Street**  
**Indianapolis, Indiana 46285**



An Equal Opportunity Employer M/F



AGRIGENETICS CORPORATION™ seeks applications from

## ECOLOGISTS

for a stimulating career position  
applying novel genetic technologies to crop agriculture.

Articulate candidates of high intellectual calibre should hold a recognized graduate degree demonstrating scientific skill in a biologically based ecological discipline, and be informed on a broad range of environmental policy affairs, including regulatory issues.

**Familiarity with matters relating to genetic diversity and gene resource conservation is essential, as is the ability to contribute in the design of longitudinal studies for such ecological factors as succession and stability of biota, niche dominance, horizontal and/or vertical transmission of novel inherited traits, as well as quantitative risk/reward analyses contrasting genetic and chemical strategies towards pest control.**

The successful candidate must have outstanding skills at interpersonal communication, and a superior ability to write clearly and expressively in administrative, scientific, and journalistic media.

Salary will be commensurate with qualifications and experience. Applicants should submit, in confidence, their resumes, a list of references, and a brief statement of their professional interests and career expectations to the **Personnel Department of Agrigenetics Corporation, 3375 Mitchell Lane, Boulder, Colorado, 80301.**



## SYNTRO CORPORATION

**A LEADER IN AGRICULTURAL  
BIOTECHNOLOGY,**

Syntro is concerned with the challenge of today's agricultural problems, and is dedicated to the successful application of biotechnology to those problems. Our newly expanded facilities are geared to meet the needs of our staff: providing a creative research environment in the heart of Southern California's scientific community. Our beautiful coastal setting allows a unique opportunity for personal and professional growth.

Syntro is currently seeking qualified individuals with expertise in the following areas...

**MOLECULAR BIOLOGY** — familiar with all aspects of recombinant DNA technology: gene isolation, cloning, expression and regulation.

**VIROLOGY** — having a working knowledge of viral cloning systems. Experience with animal viruses and recombinant DNA technology is desirable.

Syntro offers a competitive compensation package. If you would like to be part of this outstanding biotechnology group, please send resume with a list of references to:

**Personnel Director**  
**Syntro Corporation**  
**11095 Torreyana Road**  
**San Diego, CA 92121**

AN EQUAL OPPORTUNITY EMPLOYER

## SENIOR RESEARCH SCIENTIST SCIENTIFIC COORDINATOR

Program Resources, Inc., the Operations and Technical Support Contractor for the NCI-Frederick Cancer Research Facility, has a challenging scientific coordinator position in our Clinical Immunology Services.

We are seeking a senior research scientist who will lead and direct a clinical laboratory involved in serial monitoring of immune functions of cancer patients being treated with a variety of anti-cancer agents; coordinate research support for a large multidisciplinary research effort which includes cellular immunology, biochemistry, production and characterization of monoclonal antibodies, and characterization of proliferative and antiproliferative factors in cancer cells.

Applicants for this position should have a Ph.D. in immunology and 5 years of postdoctoral experience in cellular immunology, particularly related to natural killer cells and monocytes; experience in directing a large clinical research laboratory and in analysis of immunological monitoring data; familiarity with government-owned contractor operated facilities; and management experience to include supervision of staff involved in procurement of research services, shipment, and dispersion of biological materials.

This position offers a salary commensurate with education and experience, a comprehensive benefits package, to include relocation assistance, and an excellent opportunity for professional recognition and career growth. Please send curriculum vitae, salary requirement, three reference letters, and current publication list to:

NCI-Frederick Cancer Research Facility  
Program Resources, Inc.  
P.O. Box B, P.R. Number 5-0180  
Frederick, Maryland 21701  
*An Equal Opportunity Employer, M/F*



## MOLECULAR BIOLOGY FOR INDUSTRY

**CODON**, located near San Francisco, is seeking Ph.D. research scientists for the following positions:

**2 IMMUNOLOGISTS**, one with extensive experience in identification of cell surface antigens associated with disease. The applicant should have experience in techniques including immunoblotting, immunoaffinity chromatography and hybridoma technology. The other immunologist should also have modern molecular biology experience including immunological screening of recombinant clones.

**MOLECULAR BIOLOGIST** with extensive experience in cDNA cloning and/or expression of transfected genes in mammalian cells.

**2 PROTEIN CHEMISTS** with extensive experience in protein purification (HPLC and classical), modification and protein/peptide sequence analysis.

Please send a resume and the names of three references to:

**CODON**  
430 Valley Drive  
Brisbane, CA 94005

## POSITIONS OPEN

### POSTDOCTORAL RESEARCH ASSOCIATE

Position is available immediately for pharmacologist, medicinal or biochemist to study metabolism and anti-inflammatory action of new steroids. Send curriculum vitae and two letters of reference to: **Dr. H. J. Lee, Center for Anti-inflammatory Research, College of Pharmacy, Florida A & M University, Tallahassee, Fla. 32307.**

### POSTDOCTORAL RESEARCH ASSOCIATE

Position available immediately for biochemist with expertise in protein/peptide sequencing, synthesis. Project on development of synthetic vaccines. Interested candidates contact: **Dr. Erwin Goldberg, Department of Biochemistry, Molecular Biology and Cell Biology, Northwestern University, 2153 Sheridan Road, Evanston, Ill. 60201; telephone: 312-492-5416. An Affirmative Action/Equal Opportunity Employer.**

### Position: PROFESSOR AND HEAD.

**Responsibilities to be fulfilled:** Direct the education, research, and training programs of the Anatomy Department in the College of Medicine at the University of Iowa.

**Qualifications desired:** Ph.D. and/or M.D. degree, or equivalent, and a demonstrated scholar and leader in anatomical science.

**Salary:** Appropriate for qualifications and responsibilities for a professor and head of anatomy. Excellent fringe benefits.

**Employer:** *The University of Iowa, Iowa City, Iowa 52242, is an Equal Opportunity/Affirmative Action Employer.*

**Application:** Interested persons are invited to direct inquiries and submit curriculum vitae to:

**Dr. Arthur Spector, Professor  
Department of Biochemistry  
4-550 Bowen Science Building  
College of Medicine  
University of Iowa  
Iowa City, Iowa 52242**

### QUANTITATIVE EVOLUTIONARY BIOLOGIST DEPARTMENT OF ZOOLOGY UNIVERSITY OF CALIFORNIA, BERKELEY

Applications are invited, pending budgetary approval, for a tenured faculty position (associate professor or professor). Preference will be given to an individual who uses quantitative approaches in the design of research problems and analyses of evolutionary processes, but the focus may be on populational, organismal, or molecular levels of organization. A combination of empirical and theoretical research is preferred. Teaching responsibilities will include appropriate undergraduate offerings, and an advanced course incorporating modern experimental and theoretical quantitative genetics. Applicants should send curriculum vitae, bibliography with copies of appropriate papers, summary of research and teaching objectives, and names and addresses of references by 1 January 1984 to: **Evolution Search Committee, Department of Zoology, University of California, Berkeley, Calif. 94720.**

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### THE UNIVERSITY OF CALGARY RESEARCH IN BIOCHEMISTRY

The University Biochemistry Group which comprises members of the Faculties of Medicine and Science offers an interdisciplinary environment for graduate and postdoctoral research in biochemistry, molecular biology, and biotechnology. Highly qualified students with training in biochemistry, chemistry, biology, or related disciplines may be admitted to programs leading to the M.Sc. and Ph.D. degrees. Research/teaching assistantships (\$8,775 to \$11,700) are available from the University. Studentships (\$11,400 per year plus \$2,500 research allowance) and postdoctoral fellowships (\$20,760 per year plus \$5,000 research allowance) are available from the Alberta Heritage Foundation for Medical Research and may be applied for via The University of Calgary. Interested individuals should send curriculum vitae which includes courses taken and grades obtained and a statement of research interests to:

**Dr. Barry Lesser, Chairman  
Graduate Studies Committee  
University Biochemistry Group  
The University of Calgary  
2500 University Drive, NW  
Calgary, Alberta, Canada T2N 1N4**

## POSITIONS OPEN

### RESEARCH ASSOCIATE

Molecular Biology Laboratory, doing recombinant DNA research. M.S. or Ph.D. in biochemistry, microbiology, or related field. Experience with recombinant DNA techniques required. Familiarity with DNA sequencing, polynucleotide synthesis (automated), in vitro mutagenesis, and cDNA library construction desirable. Must be able to work independently and have a record of scientific accomplishments. Send résumé, including names of three references, by 3 December 1983 to: **Dr. Rona Hirschberg, Department of Biology, University of Missouri at Kansas City, 5100 Rockhill Road, Kansas City, Mo. 64110. An Equal Opportunity Institution.**

Position available for **RESEARCH ASSOCIATE** in Department of Biochemistry. Ph.D. is required in one of the biomedical sciences. Experience required in peptide mapping of proteins, HPLC separation techniques, techniques in enzyme purification and characterization, preparation of monoclonal antibodies for immunoassay, immunochemistry techniques. The project requires expertise in serum enzyme chemistry in cancer diagnosis. Applicants must be able to demonstrate abilities by publication record. Submit curriculum vitae and three names of references to: **Louisiana Department of Labor, Office of Employment, 617 St. Charles Avenue, New Orleans, La. 70130. Refer to Job Order Number 416710. Salary: \$14,500 per year; 40 hours per week. An Equal Opportunity/Affirmative Action Employer.**

**RESEARCH INVESTIGATOR** (postdoctoral). New York City non-profit laboratory. Applicant must be able to conduct reproductive, developmental biological research using tissue culture, light and electron microscopy, and biochemical methods. A background and knowledge of immunocytochemical methods are essential.

**QUALIFICATIONS:** M.S. or Ph.D. or equivalent postdoctoral degree; \$17,000 per year, 35-hour work week. Some overtime required. Send résumés to: **Dr. S. Koide, The Population Council, Center for Biomedical Research, Tower Building, 1230 York Avenue, New York, N.Y. 10021. An Equal Opportunity Employer.**

**SCIENTIST** to do basic research full-time in an area related to hemotherapy (coagulation, hematopoiesis, and so forth) as part of new research laboratory being developed by Blood Systems Research Foundation and University of New Mexico (UNM) School of Medicine. There is postdoctoral fellow, graduate student, and technologist support as well as supplies and equipment budget. Two clinical collaborators are part of unit. Contact: **Toby L. Simon, M.D., Pathology Department, UNM School of Medicine, Albuquerque, N.M. 87131. Telephone: 505-277-5872. Affirmative Action/Equal Opportunity Employer.**

### SCIENTIFIC/TECHNICAL PHOTOGRAPHER REFERENCE: PH/SP/83/3

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Applicants should have either C & G 745 (Advanced) or PQE or AIPP or equivalent qualifications and minimum of 5 years of working experience in the scientific field.

This is an international position and salary will be paid in U.S. dollars. Initial salary will depend upon qualifications and experience. Moving, housing, commutation, and education allowances are paid and there are medical and retirement benefits.

Applications, enclosing copies of certificates/diplomas together with complete curriculum vitae giving full details of present post and responsibilities, with names and addresses of two professional referees, should reach:

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ILRAD  
P.O. Box 30709  
Nairobi, Kenya**

**Closing Date: 9 December 1983.**

## Research Chemist Enzymology

CALBIOCHEM-BEHRING, a La Jolla, California based biochemical/diagnostics manufacturing firm, has an immediate opening for a qualified research professional to join the Enzymology Research & Development staff.

This individual will serve as principal investigator for complex projects in the development of procedures for isolation and purification of enzymes and other protein related biochemicals. Will provide production assistance related to isolation and analysis of protein, enzymes and substrates for application in clinical diagnostic formulations. We seek an individual with experience in isolation and purification of enzymes/proteins. Knowledge of enzyme reaction mechanisms, kinetics, stability and modern techniques in preparative biochemistry is required as well as familiarity with large scale protein purification equipment. Qualified candidates should hold a PhD in Biochemistry or related discipline with emphasis in Enzymology.

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### MOLECULAR BIOLOGISTS

The current expansion of our Molecular Biology Department has created a number of professional level positions in the Viral Genetics, Microbial Genetics and Biochemical Genetics groups. Qualified candidates will have an MS in Molecular Biology or related discipline, or a BS degree with significant research experience. A proficiency in recombinant DNA technology is required.

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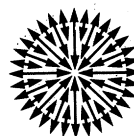
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- DNA sequencing
- Oligonucleotide synthesis

**RESEARCH TECHNICIANS** — M.S. or B.S. in the Biological Sciences with 2-4 years experience in the above mentioned areas.

Individuals interested in exploring these opportunities further should forward their curriculum vitae and letter describing interests to: **Director of Personnel, Damon Biotech, 119 Fourth Avenue, Needham Heights, MA 02192. We are an equal opportunity employer m/f/h.**



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**Research Associate** to synthesize novel heterocyclic compounds as water disinfectants, collect, analyze data, write research papers/reports, and supervise graduate research assistants. Requires M.S. in organic chemistry and 2 years of advanced research training. Knowledge of synthetic heterocyclic chemistry and analytical techniques such as NMR, IR, mass spectrometry, and HPLC. Salary: \$15,000 per year; 40 hours per week. Send résumés to: **Doris Kindell, Alabama State Employment Service, P.O. Box 2236, Opelika, Ala. 36803-2236**, or apply in person at any Alabama State Employment Service. Job Order 0038071. *Equal Opportunity Employer.*

## RESEARCH ASSOCIATE

Full-time position at the Lindsley F. Kimball Research Institute for work on protein and cellular components participating in blood coagulation. Postgraduate with Ph.D. degree. Experience in biochemistry, biophysics, and cell biology preferable. Excellent benefits package. Send résumé and three references to: **M. C., The New York Blood Center, 310 East 67 Street, New York, N.Y. 10021. An Equal Opportunity Employer.**

**RESEARCH**—Research staff position, tenure-track, available for independent research in the general area of NMR investigations of structure, dynamics, and function of biological macromolecules and their complexes. Multinuclear high-resolution FT NMR spectrometers available. Send curriculum vitae and statement of proposed research to: **Dr. Mildred Cohn, Chairman, Search Committee, Institute for Cancer Research of the Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, Pa. 19111. Equal Opportunity Employer.**

**RESEARCH SCIENTIST.** San Francisco area biotechnology firm requires individual with experience in plant genetics/tissue culture for multi-disciplinary team working on cytoplasmic genetics in various crops. Requires Ph.D.; minimum of 2 years of experience in cell biology, plant protoplast culture/fusion, emphasis on the analysis of cytoplasmic genes. Send résumé, publications list, and names of three references to: **Ruth Everett, International Plant Research Institute (IPRI), 830 Bransten Road, San Carlos, Calif. 94070.**

**VICE PRESIDENT—DIRECTOR OF RESEARCH AGRICULTURAL BIOTECHNOLOGY.** West Coast biotechnology firm has a unique opportunity for a top-caliber scientist/manager reporting to president. We are a multi-disciplinary, profit-oriented company serving the food and agriculture industries. Ph.D. and record of accomplishment in science and research management required. Exceptional professional and financial growth potential. Please reply to: **Suite 134, 544 El Camino Real, Belmont, Calif. 94002.**

## RESEARCH GRANTS

**RESEARCH GRANTS** are available from the Tourette Syndrome Association. For information, researchers interested in training fellowships, clinical studies, and neuroscientifically oriented research projects relevant to T.S. should contact: **Permanent Research Fund, Tourette Syndrome Association, Inc., 41-02 Bell Boulevard, Bayside, N.Y. 11361. Telephone: 212-224-2999.**

## SYMPOSIUM

### SHORT-TERM GENETIC BIOASSAYS IN THE EVALUATION OF COMPLEX ENVIRONMENTAL MIXTURES

A symposium will be held 27 to 29 March 1984 at the Hotel Europa in Chapel Hill, N.C., sponsored by the Genetic Toxicology Division of the Health Effects Research Laboratory, U.S. Environmental Protection Agency, Research Triangle Park, N.C.

Topics will emphasize the following areas: complex mixtures update, exposure monitoring, integrated hazard assessment, and risk assessment. Paper and poster abstracts related to these areas are being solicited from all interested individuals. Abstracts must be submitted by 16 December 1983.

For further details and registration forms, contact: **Joan Croteau, Symposium Coordinator, Northrop Services, Inc., P.O. Box 12313, Research Triangle Park, N.C. 27709. Telephone: 919-549-0411.**

## SYMPOSIUM

### FIRST WORLD CONGRESS ON THE ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS) 16 and 17 February 1984—New York, N.Y.

This international symposium will address the subject of AIDS in detail bringing together leading clinical and laboratory investigators to discuss AIDS clinical features, epidemiology, laboratory markers, infections, Kaposi's sarcoma, and current therapy.

Pre-registration is required and the number of participants is limited to 500. Call or write:

**Drug Development Institute of America, Inc.  
29 State Highway 34  
Colts Neck, N.J. 07722  
Telephone: 201-431-3801**

## CONFERENCES

### The New York Academy of Sciences International Conference On BIOTIN: BIOCHEMICAL, NUTRITIONAL AND CLINICAL ASPECTS 2 to 4 May 1984 The Barbizon-Plaza Hotel New York City

The conference will examine the following topics: cellular functions of biotin, regulation of biotin enzymes, mechanisms of action of biotin in enzyme reaction, nutritional aspects, clinical problems relating to biotin, and synthesis transport and biotin-binding proteins.

In addition, the conference will feature a limited number of poster presentations. The deadline for submission of abstracts is 1 February 1984. The abstracts should include the name of the author(s), institution, and a 100- to 200-word summary of the work to be presented. Send abstracts to the conference chair: **Dr. K. Dakshinamurti, Department of Biochemistry, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, Canada R3E 0W3.**

Chairs: **Dr. K. Dakshinamurti, University of Manitoba;** and **Dr. H. N. Bhagavan, Hoffmann-La Roche, Inc.**

For conference program and registration information, contact: **Conference Department, The New York Academy of Sciences, 2 East 63 Street, New York, N.Y. 10021; telephone: 212-838-0230.**

### The New York Academy of Sciences Conference On INTERMEDIATE FILAMENTS 21 to 23 May 1984 The Barbizon-Plaza Hotel New York City

Rapid progress has been made recently in understanding the structural, biochemical, and molecular biology of intermediate filaments and new approaches and applications of the information are now emerging.

The conference will feature invited lecturers and a limited number of poster presentations. Abstracts should include the name of the author(s), institution, and a 200-word summary of the work to be presented. Send abstracts by 1 February 1984 to: **Dr. E. Wang, The Rockefeller University, 1230 York Avenue, New York, N.Y. 10021.**

For conference program and registration information, contact: **Conference Department, The New York Academy of Sciences, 2 East 63 Street, New York, N.Y. 10021; telephone: 212-838-0230.**

## FELLOWSHIPS

**PREDOCTORAL AND POSTDOCTORAL FELLOWSHIPS IN BIOCHEMISTRY.** The Department of Biochemistry, University of Texas Health Science Center at Dallas (UTHSCD), invites applications from qualified individuals who wish to pursue pregraduate or postgraduate studies related to the fundamental chemistry of biological processes. Major areas of emphasis include cell and developmental biology, endocrinology, enzymology, immunology, molecular genetics, pharmacology, and toxicology. Appointees will be supported by state and federal funds or the Robert A. Welch Foundation Fellowships. Postdoctoral candidates should make application prior to 15 May by sending curriculum vitae. Predoctoral candidates should request application forms from: **Chairman, Graduate Studies Committee in Biochemistry, UTHSCD, 5323 Harry Hines Boulevard, Dallas, Texas 75235. An Equal Opportunity/Affirmative Action University.**

## FELLOWSHIPS

### POSTDOCTORAL FELLOWSHIP

Postdoctoral fellowship experience in neurology of aging available through Tarbox Parkinson's Disease Institute at Texas Tech University Health Sciences Center. Fellowship is for up to 3 years in duration for study of Alzheimer or Parkinson disease. Contact: **J. Thomas Hutton, M.D., Ph.D., Department of Medical and Surgical Neurology, Texas Tech University Health Sciences Center, Lubbock, Texas 79430.**

**PREDOCTORAL AND POSTDOCTORAL FELLOWSHIPS IN NEUROLOGY** available to start on or before 1 July 1984. Research areas focus upon physiology and/or anatomy of vestibular and auditory systems, clinical neurology, and audiology/psychoacoustics. Stipends are set by NIH depending upon experience. Eligibility limited by NIH regulations to U.S. citizens or noncitizens with permanent status. For further information, write to: **V. Honrubia, M.D., Division of Head and Neck Surgery, University of California, Los Angeles, Calif. 90024. The University of California is an Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL FELLOWSHIP.** The Department of Pediatric Gastroenterology of the New York Hospital-Cornell Medical Center has an immediate opening for a **POSTDOCTORAL CHEMIST OR BIOCHEMIST.** Our research interest involves the photochemistry and physical chemistry of bilirubin and bilirubin conjugates. The applicant should have HPLC experience and have at least a basic knowledge of the use of NMR as a biomolecular probe. Competitive salary and benefits. Interested applicants should send their curriculum vitae and two letters of recommendation to: **William Spivak, M.D., Department of Pediatrics, New York Hospital, 525 East 68 Street, New York, N.Y. 10021.**

### POSTDOCTORAL FELLOWSHIP

Applications are solicited for a postdoctoral fellowship in the laboratory of Biochemical Genetics and Metabolism at Rockefeller University. Research emphasis will be on understanding the structure and function of the human apolipoprotein gene family. Preference will be given to individuals with experience in molecular biology and/or protein chemistry. Please send curriculum vitae and the names of three references to: **Dr. Jan L. Breslow, Rockefeller University, 1230 York Avenue, New York, N.Y. 10021.**

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## **MOLECULAR BIOLOGIST**

Experience in mammalian gene expression in bacterial and eukaryote systems required. DNA/RNA hybridization expertise essential. A Ph.D. with 0-3 years' postdoctoral experience is required. Familiarity with immunoassay techniques desirable.

## **BIOCHEMICAL ENGINEER**

Responsibilities will include scale-up of cell culturing for laboratory to pilot plant and production. Requires an MS or Ph.D. with experience in culturing mammalian cells. Knowledge of process equipment design and operation is essential.

## **NUCLEOTIDE CHEMIST**

Experience in solution- and solid-phase oligonucleotide synthesis and purification essential. An MS or Ph.D. with 1-2 years' hands-on expertise is required. Knowledge of the use of DNA probes in hybridization studies would be a definite plus.

## **INSTRUMENT SCIENTIST**

Requires 2-4 years' experience designing and building analytical instrumentation. Knowledgeable in optics, detectors, and fluid handling. Educational background includes an advanced degree in chemical engineering, analytical chemistry, or related field.

## **IMMUNOCHEMIST**

A Ph.D. with 2-4 years' postdoctoral experience in the development of ELISA and RIA methods essential. Knowledge of FIA desirable. Responsibilities will include the development of new non-isotopic immunoassay techniques and reagents. Industrial experience would be useful but not essential.

## **SOFTWARE ENGINEER**

This staff-level position requires 2-4 years' experience developing software to control electro-mechanical systems. Must be familiar with A/D conversion techniques, stepper motor control, closed and open-loop control strategies. Computer background should include real-time, multi-tasking operating systems, microprocessors and assembly language programming.

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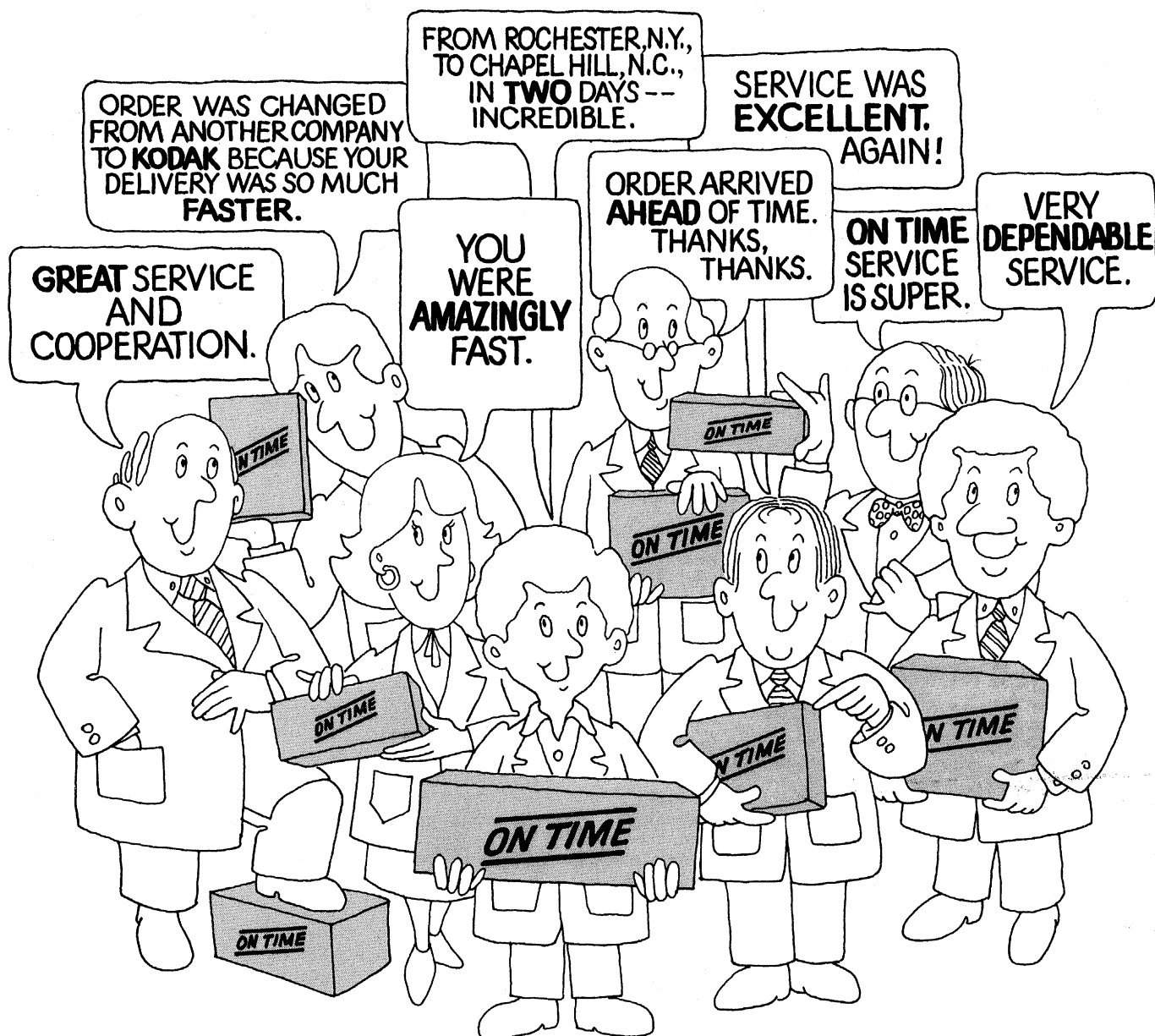
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