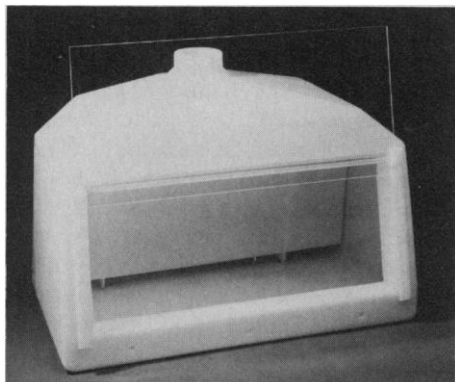


## Products & Materials

### Plastic Fume Hood

The H50000 is a portable, one-piece fume hood constructed of polyethylene. Its dimensions are 106.7 cm wide, 50.8 cm deep, and 76.2 cm high, and it weighs only



50.8 kg. Installation consists of connecting the 15.24-cm (6 inch outside dimension) venting stack to ducting from a blower or central exhaust system. A clear acrylic sliding panel travels vertically in side tracks and stays in either open or closed position. Bel-Art Products. Circle 569.

### Ultrahigh Purity Avidin

AVIDIN is a highly purified, crystalline avidin prepared from egg whites. A new isolation process guarantees a single band of glycoprotein. Activities of different batches range from 13.0 to 14.8 units per milligram of protein. A biotin antagonist, AVIDIN is suited for applications in affinity chromatography, affinity cytochemistry, affinity labeling, inhibition of bacteriophages, and cell surface molecular interactions. Less nonspecific binding occurs owing to the high purity, resulting in lower background noise and clearer results. International Enzymes. Circle 562.

### Shaking Water Bath

The Model SS-40 is an electronically controlled thermostatic bath with a shaking platform driven magnetically from underneath the tank. Because the water bath tank

is on top of the shaking mechanism, the unit has a small footprint, yet has a tank capacity of up to 36 25-ml Erlenmeyer flasks. Temperature may be maintained between 0° to 80°, 0° to 100°, or 20° to 140°C. The temperature control is completely electronic, and its dial is marked in intervals of 1°C. The shaking mechanism is a permanently lubricated system with a magnetic drive and a variable speed motor. Stroke length and speed are adjustable: the length can vary between 1.27 and 5.08 cm and the speed between 0 and 200 strokes per minute. Safety features include a fixed-temperature thermal cutoff, no protruding arms or cranks, and a motor that disengages if the platform meets an obstruction. Science/Electronics. Circle 567.

### Anaerobic Bacteria Library Database

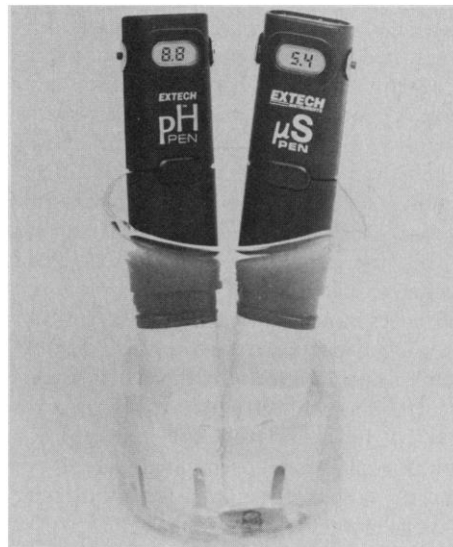
An anaerobic bacteria library database is now available for the HP 5898A microbial identification system. The library contains more than 50 groups of anaerobes, including species of actinomycetes, bacteroides, *Clostridium*, fusobacteria, *Propionibacterium*, and *Veillonella*. Identification is achieved by comparing fatty acid profiles to the system's composite profiles derived from known strains. These profiles are obtained through high-resolution gas-chromatographic analyses of whole cell lipids. The system generates a printed report of the fatty acid profile, and a pattern recognition program computes a similarity index to the closest library match. Automated microbial identification improves accuracy by eliminating tests based on color perception and other subjective methods. The system will process up to 50 samples a day. The software operates on the HP 9000 Series 200 and 300 computers. Hewlett-Packard. Circle 570.

### Neutrally Buoyant Glass Beads

Ventreglas beads are microcarrier glass beads that do not require rapid stirring speeds. They can be made with a specific gravity of 1.03 and diameters of 90 to 150 or 150 to 210  $\mu\text{m}$  or to densities and diameters specified by the user. Except for their low specific gravity, Ventreglas beads offer the same advantages as glass: they have smooth, inert, nonporous surfaces, and they are easily and effectively sterilized by irradiation or autoclaving. Ventreglas beads have been used up to ten times with no degradation of cell growth capacity. Bioventures Group, Ventrex Laboratories. Circle 583.

### Pocket pH, Conductivity Gauges

The pH Pen and the Conductivity Pen are battery-operated, pocket-sized measurement devices with a digital liquid crystal display. The pH Pen can measure pH between 2 and



12 with a 0.1 resolution and operates at temperatures between 5° and 40°C. The Conductivity Pen contains a built-in cell with an automatic temperature compensator. Each pen weighs only 113.4 g. Each instrument turns on when its cap is removed, and it begins measurement upon immersion in a liquid. Extech Instruments. Circle 566.

### Literature

The G86-7 *Instrument Catalog* contains 32 pages of gauges, flowmeters, and other instruments as well as another 32 pages of technical papers. Gilmont Instruments. Circle 592.

*Very Thick Film Columns* is a brochure featuring a line of columns for highly volatile compounds. J & W Scientific. Circle 593.

*Surface Mount Components* features discrete semiconductors, Hall effect integrated circuits, interface and linear IC's, solid tantalum capacitors, Monolithic ceramic capacitors, resistor networks, computer delay lines, and inductors. Sprague Electric. Circle 594.

*The 7100 Aerospray* details a hematology slide stainer that stains and dries up to 12 smeared slides in 3 minutes. Wescor. Circle 602.

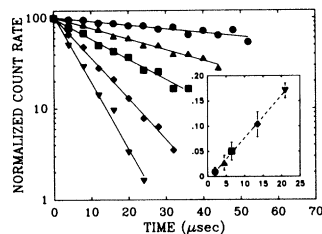
*Innovation in Freeze-Drying Technology* contains information on a line of standard and custom-built freeze-drying equipment. Edwards High Vacuum. Circle 603.

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

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The American Mathematical Society  
announces

## The Sixtieth Annual Josiah Willard Gibbs Lecture

**Thomas C. Spencer**

**Schrödinger operators  
and  
dynamical systems**

Theatre  
**San Antonio Convention Center**  
San Antonio, Texas  
Wednesday, January 21, 1987  
8:30 p.m.

No admission charge.  
The public is invited.

The Gibbs Lectures enable the public and the academic community to become aware of the contribution that mathematics is making in today's society.

Thomas C. Spencer is a Professor of Mathematics at the Institute for Advanced Study in Princeton, New Jersey. He has taught at New York University, Courant Institute, Harvard University, Princeton University, Rockefeller University and Rutgers University, and has been an Alfred P. Sloan Foundation Fellow.

# Personnel Placement

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

**LINE CLASSIFIED ADVERTISING DEADLINES:**  
2 January issue (mailed 2 January): **17 December**  
9 January issue (mailed 9 January): **23 December**  
16 January issue (mailed 16 January): **2 January**  
23 January issue (mailed 23 January): **9 January**

**POSITIONS WANTED:** 40¢ per word, plus \$4 for use of box number, per week. \$10 minimum, per week. Prepayment required. This rate is available only to individuals seeking jobs.

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SCIENCE  
1333 H Street, NW  
Washington, DC 20005

## POSITIONS WANTED

**Industry Biotechnologist (Ph.D.).** Aggressive scientist with major biotechnology firm seeks bold start-up company in Southern California/Los Angeles area. Experience in engineered microbes/eukaryotes, new product development, and so forth. Strong entrepreneurial flair dedicated to bringing new ideas and products to the market. Box 219, SCIENCE. 12/5,12

**Microbiologist. Ph.D.** 1986. Research experience in insect microbiology and biological nitrogen fixation. Trained with modern techniques such as GLC, HPLC, radioisotope labeling, bioassay for different metabolites, ELISA, and electron microscopy. Seeks postdoctoral position in university or industry. Box 218, SCIENCE. X

**Molecular Biologist, Ph.D.,** 1986. Experienced in cDNA library construction, cloning, Southern blots, Northern blots, and sequencing, seeks industrial position. Box 215, SCIENCE. X

If you need a **Ph.D., Consulting Scientist, and General Tutor**, please write or telephone: Dr. Ghouri, 509 Connie Lane, Manchester, MO 63011; telephone: 314-394-0589. X

**Research Biotechnology, M.S.** with industrial experience, desires challenging laboratory position. Laboratory experiences include molecular biology, recombinant DNA, fermentation scale-up, microbial strain and process development, and utilization of radioisotopes. Separations techniques include: LC, HPLC, agarose/polyacrylamide electrophoresis, ultrafiltration, and supercritical fluid extraction. Box 208, SCIENCE. 12/5, 12, 19

## POSITIONS WANTED

**Plant Tissue Culturist. Ph.D.** Experienced in production, isolation, and measurement of secondary products in cell and organ cultures. Publications; private research or teaching. Box 217, SCIENCE. X

**Senior Health Science Writer,** with M.S. in zoology, pre-Ph.D. training in cell biology and biomedical ethics, 23 years at NIH, six professional affiliations, and scores of publications. Expert knowledge of diabetes, arthritis, atherogenesis, colon cancer, disease prevention, molecular genetics, and neuroscience. Seeks executive position. Box 220, SCIENCE. X

**Technical Writer, Ph.D.** Twenty years of experience in research and writing for scientific, technical, and popular markets. Credits include fifteen books in three languages and articles in varied scientific and academic journals. Seeks freelance projects of all kinds, including manuals, software documentation, grants and proposals, library research, manuscript critiques and editing, ghostwriting, lectures, and speeches. Box 214, SCIENCE. 12/5, 12, 19; 1/2

## POSITIONS OPEN

**ANALYTICAL CHEMIST, Ph.D.** level, experienced in GC/MS, HPLC, and RIA, with interest in neuroscience, to direct laboratories providing support for biological psychiatry research group. Responsibilities include development of new analytical methods, directing sample and analytical data handling procedures, and supervision of research technicians. Please send curriculum vitae including salary requirements to:

**Kenneth L. Davis, M.D.**  
Psychiatry Service/Room 3B-50  
VA Medical Center  
130 West Kingsbridge Road  
Bronx, NY 10468

**ASSISTANT OR ASSOCIATE PROFESSOR** tenure track in the field of **molecular biophysics** starting date 1 July to 1 October 1987. Applications are invited from candidates with Ph.D. degree or its equivalent and appropriate postdoctoral experience in any branch of molecular biophysics. Preference will be given to candidates with a strong record of research accomplishments. Interested candidates should submit curriculum vitae, bibliography, reprints, summary of current research, and future research goals, as well as the names of at least four references. *The department is especially interested in women and minority applicants.* All applications should be addressed to: **Chairman, Department of Biochemistry and Molecular Biophysics, Columbia University, Health Sciences, 630 West 168 Street, New York, NY 10032.**

*Columbia University is an Equal Opportunity/Affirmative Action Employer*

## NORTHWESTERN UNIVERSITY ASSISTANT PROFESSOR

The **Biomedical Engineering Department** has two tenure-track positions in physiological modeling or biomechanics for assistant professors with an engineering background. Applicants should submit by 1 February: curriculum vitae, outlines of future research plans and teaching interests, and names and addresses of at least three references to: **A. E. Kertesz, Chairman, Biomedical Engineering Department, Northwestern University, Evanston, IL 60201. Northwestern is an Equal Opportunity/Affirmative Action Employer.**

## ASSISTANT PROFESSOR MICROBIAL GENETICS

Academic year, tenure-track position, fall 1987. Develop microbial genetics and molecular biology courses and direct master's level graduate student research. May participate in introductory courses. Ph.D. required. Salary commensurate with qualifications and experience. Direct inquiries to: **Michael R. Winfrey, Search Committee Chair, Department of Biology and Microbiology, University of Wisconsin-La Crosse, La Crosse, WI 54601. The University of Wisconsin-La Crosse is an Affirmative Action/Equal Opportunity Employer.**

## POSITIONS OPEN

**ASSISTANT OR ASSOCIATE PROFESSOR, MICROBIOLOGY.** The Department of Infectious Disease and Microbiology, Graduate School of Public Health, University of Pittsburgh and the Pittsburgh Cancer Institute invites applications for a core faculty position. The salary and rank will depend on qualifications and experience. Candidates must have a Ph.D. or equivalent, at least 2 years of postdoctoral experience, and demonstrated ability to conduct independent research. Priority will be given to candidates with experience in molecular virology of herpesviruses. The successful candidates will be expected to participate in ongoing research on laboratory, clinical, and immunologic research on herpesviruses or to develop research that will complement and supplement this research program. Directing research of graduate students and participation in teaching and development of courses is also expected. Send curriculum vitae, the names of three references, reprints of key publications, and a brief description of present research to: **Chairperson, IDM Search Committee, Department of Infectious Diseases and Microbiology, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA 15261.** *An Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT PROFESSOR:** A department at the University of Texas Health Science Center at Dallas (UTHSCD) invites applications for a tenure-track position as an assistant professor. Must have M.D. or Ph.D. in molecular biology or equivalent, at least 3 years of postdoctoral training, and 1 or more years of experience of teaching at the university level. In addition to teaching duties for medical students, graduate students and postdoctoral fellows, the appointee will be expected to participate in research involving the molecular basis of cholesterol metabolism and to supervise technicians. Candidates must be experienced in molecular biology and biophysical biochemistry, including laboratory work in DNA cloning and sequencing, lipoprotein metabolism, tissue culture cell transfections, protein purification and fluorescence, and UV and NMR spectroscopy. Qualified individuals should send their curriculum vitae and cover letter to: **Personnel Department, Attention: Z926, UTHSCD, 5323 Harry Hines Boulevard, Dallas, TX 75235.** *An Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT/ASSOCIATE PROFESSOR MOLECULAR PARASITOLOGY UNIVERSITY OF CALIFORNIA LOS ANGELES (UCLA)

The Department of Microbiology and Immunology at UCLA School of Medicine is seeking a tenure-track assistant-associate professor in the area of molecular parasitology. Outstanding candidates with a Ph.D. and postdoctoral experience having a significant publication record are invited to apply. The successful candidate will join a group of vigorous faculty members and will take part in developing a program in parasitology to which the department is committed. He/she is expected to develop a strong and independent research program in molecular parasitology and will participate in teaching medical and graduate students. Salary is negotiable. Apply by 15 February 1987, with a detailed curriculum vitae, copies of two recent publications, a brief outline of a future research plan and three references to: **Dr. D. P. Nayak, Chairman, Parasitology Search Committee, Department of Microbiology and Immunology, UCLA School of Medicine, Los Angeles, CA 90024.**

*UCLA is an Affirmative Action and Equal Opportunity Employer.*

Tenure-track position at the **School of Marine Science, The Virginia Institute of Marine Science, The College of William and Mary**, at the **ASSISTANT/ASSOCIATE PROFESSOR** level. Salary range \$30,000 to \$35,000. A solid knowledge of organic chemistry and proficiency with environmental sample extraction and analysis, using GPC, HPLC, and capillary GC is required. Familiarity with computerized capillary GC-MS is desirable. Curriculum vitae and the names of three references with telephone numbers should be submitted to: **Professor Rudolf H. Bieri, Chairman of the Search Committee, Virginia Institute of Marine Science, Gloucester Point, VA 23062**, by 19 December 1986. *The College of William and Mary is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

## POSITIONS OPEN

### THE CENTER FOR NEUROSCIENCE DEPARTMENT OF ANATOMY AND NEUROBIOLOGY COLLEGE OF MEDICINE THE UNIVERSITY OF TENNESSEE, MEMPHIS

Positions of **ASSISTANT, ASSOCIATE AND FULL PROFESSOR** are available. Rank and salary to be commensurate with qualifications. Candidates must show evidence of strong research achievements. The department is the center of a rapidly expanding, multidisciplinary neuroscience program. Candidates must be pursuing research programs in neuroscience, especially utilizing molecular, neurochemical, and neurogenetic techniques. The position also requires teaching in anatomical courses. Please submit, by 30 December 1986, curriculum vitae, statement of research interest, and names of three individuals who can be contacted for letters of reference to: **S. T. Kitai, Chairman, Department of Anatomy and Neurobiology, College of Medicine, The University of Tennessee (UT), Memphis, 875 Monroe Avenue, Memphis, TN 38163.**

*UT Memphis is an Equal Opportunity/Affirmative Action Employer.*

### DEPARTMENT OF PSYCHIATRY

**Louisiana State University (LSU) Medical Center in Shreveport.** As a result of program growth and development, the Department of Psychiatry is seeking highly qualified applicants for tenure-track positions at the **assistant, associate and full professor** levels. Research experience and clinical expertise in biology and psychopharmacology of affective disorders, schizophrenia, and geriatric dementia preferred. Clinical researchers in substance abuse also invited to apply. Assistant professor position requires Board-eligibility and commitment to an academic-research career. All positions involve resident and student supervision, but no direct service obligations. Submit curriculum vitae and addresses of three references to: **John Straumanis, M.D., Professor and Chair, Department of Psychiatry, LSU Medical Center, P.O. Box 33932, Shreveport, LA 71130.** *Affirmative Action/Equal Opportunity Employer.*

### ASSISTANT SECRETARY FOR RESEARCH SMITHSONIAN INSTITUTION

The **Smithsonian Institution** invites applications and nominations for the position of assistant secretary for research. The assistant secretary for research serves as the principal advisor to the secretary of the Smithsonian on all research policies, programs, and activities of the institution and is responsible for the central planning, coordination, and oversight of the institution's research operations in history, art, and sciences ranging from natural history and anthropology to astrophysics, tropical biology, and modern zoology in both museum settings and at remote research installations. Administering an annual budget of approximately \$60 million in federal appropriations and nonappropriated trust funds, the assistant secretary for research is also responsible for overseeing the administration of the Smithsonian's libraries and other organization units of direct relevance to the institution's research programs. In addition, the assistant secretary for research often represents the research interests of the Smithsonian before the Congress, the Executive Branch, professional societies, educational institutions, foundations and granting organizations, the public, and the Institution's Board of Regents.

Candidates should have a Ph.D. or equivalent preparation in a field of study relevant to the Smithsonian. Additionally, candidates should have a record of superior scholarly accomplishment, a facility for written and oral communication, relevant administrative experience, and exceptional leadership ability.

Applications and nominations should be sent by 30 January 1987 to:

**James M. Hobbins  
Secretary to the Search Committee  
Room SI-215  
Smithsonian Institution  
Washington, DC 20560**

All applicants and nominations will be treated confidentially.

*The Smithsonian Institution is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**ASSISTANT PROFESSOR OF PHARMACOLOGY, Marshall University School of Medicine.** Tenure-track position. Minimum qualifications: applicants should have Ph.D. and/or M.D. degree(s); at least 2 years of postdoctoral or equivalent experience and have demonstrated the ability to conduct independent research. Preference will be given to applicants whose research interests are in the area of biochemical neuropharmacology. Candidates must be committed to developing a strong, extramurally funded research program and teaching medical and graduate students. Submit curriculum vitae, a statement of research interests, and the names of three references to: **Gary O. Rankin, Ph.D., Professor and Chairman, Department of Pharmacology, Marshall University School of Medicine, Huntington, WV 25704-2901.** *Marshall University is an Equal Opportunity/Affirmative Action Employer.*

**California State University, San Bernardino**, invites applicants for a tenure-track position in the Department of Biology, available September 1987. Appointment is at the rank of **ASSISTANT PROFESSOR OR ASSOCIATE PROFESSOR** (\$25,812 to \$39,168 for the academic year) based on experience. We offer B.A., B.S., and M.S. degrees in biology. Qualifications: Ph.D. in molecular biology or related fields. Expertise in developmental biology and in cellular biology and previous teaching experience will be in the candidate's favor. Deadline for application will be 15 March 1987. Submit letter of application, curriculum vitae, and three letters of recommendation to: **Dr. Sarojam K. Mankau, Department of Biology, California State University, 5500 University Parkway, San Bernardino, CA 92407.** *An Equal Opportunity, Affirmative Action, Section 504, Title IX Employer.*

**ASSISTANT OR ASSOCIATE PROFESSOR OF PHARMACOLOGY AND TOXICOLOGY.** The Department of Pharmacology and Toxicology, West Virginia University Medical Center, has a tenure-track position available in the spring or summer of 1987. Applicants should have a Ph.D., M.D., or equivalent degree and a minimum of 2 years of postdoctoral research experience. Training in the specific discipline of pharmacology is highly desirable. Evidence of the ability to develop an independent research program is essential. No specific research area is required, but aspects of molecular or biochemical pharmacology are preferred. In addition to independent research, collaborative research is encouraged. Duties will also include the teaching of students of the health profession and participation in a strong graduate training program. Curriculum vitae and three letters of reference should be sent to: **Dr. William W. Fleming, Chairman, Department of Pharmacology and Toxicology, West Virginia University Medical Center, Morgantown, WV 26506.** The closing date for applications is 1 January 1987. *West Virginia University is an Equal Opportunity/Affirmative Action Employer.*

**BIOCHEMISTRY FACULTY POSITIONS—University of Maryland School of Medicine.** Two tenure-track faculty positions are available at the assistant professor level.

1. **Eukaryotic molecular biologist.** We are seeking a person who will initiate an independent research program in basic molecular biology or molecular genetics using animal cell or yeast systems.

2. **Protein chemist/biochemist.** We are seeking a person who will initiate an independent research program investigating protein structure-function relationships. This individual will also direct the departmental protein sequencing facility.

Applicants should submit curriculum vitae and a one-page description of research plans. Deadline for receipt of applications is 31 January 1987. Send all materials or inquiries to: **Search Committee, Department of Biological Chemistry, University of Maryland School of Medicine, 660 West Redwood Street, Baltimore, MD 21201.** *The University of Maryland is an Affirmative Action/Equal Opportunity Employer.*

**BIOLOGISTS.** The Nature Conservancy is building a national biological survey based on programs operating eventually in all fifty states. This large network is constantly in need of biologists, though any given state may or may not have an opening at a given time. Write: **Administrative Assistant, Science/Heritage, The Nature Conservancy, 1800 North Kent Street, Arlington, VA 22209**, for an address list of these programs.

## FACULTY POSITIONS IN BIOLOGICAL SCIENCES

**Bacterial Physiology  
Evolution  
Genetic Engineer  
Genetics  
Plant Systematics**

The Department of Biological Sciences at Texas Tech University invites applications for the above tenure-track positions. The positions are primarily at the assistant professor level, but all professorial ranks will be considered. Candidates are expected to develop independent research programs in their field of expertise, demonstrate a strong commitment to obtaining extramural grant support, and participate in departmental graduate and undergraduate teaching programs. All candidates must possess a Ph.D., and at least one year of postdoctoral training is highly preferred. Texas Tech University is one of four major multipurpose state universities in Texas. The department consists of 30 full-time faculty with research emphasis in the areas of cell and molecular biology, microbiology, developmental biology, biotechnology, and evolutionary biology. Several of the faculty participate in joint research projects with the School of Medicine, the College of Agriculture, and the Museum. All candidates should submit a curriculum vitae, copies of recent publications, a description of research plans and three letters of recommendation to: Dr. John M. Burns, Chairman of Search Coordinating Committee, Department of Biological Sciences, P.O. Box 4149, Texas Tech University, Lubbock, Texas 79409. Deadline for applications is Feb. 1, 1987.

*Texas Tech University is an Affirmative Action-Equal Opportunity Employer.*

## PROTEIN CRYSTALLOGRAPHERS

Applications are invited from macromolecular crystallographers interested in joining exciting receptor-based drug design projects at our seaside laboratories in La Jolla, California. We seek talented scientists experienced in the experimental aspects of structure solution, refinement, and molecular graphics. Successful candidates must be willing to interact with colleagues in molecular biology, biochemistry and organic synthesis.

Facilities include state-of-the-art diffraction, computation, and graphics hardware. Compensation package includes employee stock option plan. Please apply with curriculum vitae and names of references in confidence to:

Dr. David Matthews



**Agouron**  
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505 Coast Boulevard South  
La Jolla, California 92037

## DIRECTOR

### FLORIDA INSTITUTE OF OCEANOGRAPHY STATE UNIVERSITY SYSTEM OF FLORIDA

Applications are invited for the position of Director, Florida Institute of Oceanography (FIO), in St. Petersburg campus of the host University of South Florida. FIO is part of the State University System of Florida, and supports oceanographic research/education, including grants and contracts, at the state's universities. FIO operates the research vessels BELLWIS (72') and SUNCOASTER (110') and facilitates other research ship operations.

The candidate should have a doctorate in oceanography or a related scientific field and equivalent broad experience and demonstrated capability in administration, oceanographic research, and higher education. Firsthand knowledge of ocean-going research operations and management experience at a marine research facility is desirable.

The director serves as chief executive officer for FIO, which includes: directing the staff responsible for day-to-day operations; developing and managing an annual budget; acquiring and managing grant/contracts; scheduling vessel operations; implementing of educational programs generated by FIO and its members; and acquisition and maintenance of seagoing research equipment. It is the primary responsibility of the director to promote and encourage interinstitutional programs which benefit Florida. The director serves as a representative of the member organizations at the state, national, and international level and is responsible for public relations.

Personnel of the Institute, including the director, are eligible for faculty appointments in the State University System.

Interested persons should send a curriculum vitae, a description of pertinent experience and a list of references by January 1, 1987 to: Search Committee Chairman, Florida Institute of Oceanography, 830 First Street South, St. Petersburg, Florida 33701.

*An Equal Opportunity/Affirmative Action Employer*



## Scientist-Human Genetics

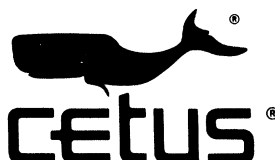
At Cetus Corporation, we are committed to maintaining our leading role in the research and development of biotechnology-based therapeutics.

We currently seek an individual to conduct research in molecular genetic approaches to the diagnosis of human genetic diseases and genetic predisposition. The successful candidate will possess a Ph.D and three or more years' postdoctoral experience in molecular genetics, human genetics or molecular biology.

Please send your resume in confidence to:

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Box HESC  
1400 Fifty-third Street  
Emeryville, CA 94608**

E/O/E



Kraft, Inc., a recognized leader in the food industry, is currently seeking individuals for Research & Development with the following credentials:

## ELECTRON MICROSCOPIST—Ph.D.

Requires experience in cryo microtomy, freeze fracture and freeze etch techniques.

## COLLOID & EMULSION SCIENTISTS

These positions require a Ph.D. in Colloid & Emulsion Science, Physical Chemistry, Chemical Engineering or a related field.

- Minimum 5 years industrial experience relating chemical properties of emulsifiers to their function. Knowledge of water-in-oil emulsions helpful.
- The assembly of experimental equipment, including computerization, for research in colloid and emulsion science. Must also have ability to apply such equipment to the study of oil/water interfaces.
- Liquid/liquid or liquid/solid interfacial rheology.

## BASIC FOOD CHEMISTS

Research Scientists, Ph.D., preferably with postdoctoral experience, although candidates with experience equivalent to a Ph.D. will also be considered.

- Physical Biochemist to characterize the interaction of proteins with other components. Strong background in thermodynamics required.
- Biochemist with broad experience in protein analytical techniques (HPLC, electrophoresis, etc.) as well as enzymology.
- Flavor Chemist with emphasis on modern analytical separation and detection methods as well as synthetic organic chemistry.

Please send resume with salary history in confidence to:

**Manager, Employment and  
College Relations  
Kraft, Inc. Technology  
801 Waukegan Road  
Glenview, Illinois 60025**

*An Equal Opportunity Employer M/F*

## POSITIONS OPEN

### ASSISTANT RESEARCH SCIENTIST

The position requires actively participating in ongoing and future experiments at National Laboratories in New York and Illinois utilizing high energy proton beams (polarized and unpolarized) and polarized proton targets. One responsibility will be on-line and off-line computing. Ph.D. required in experimental high-energy physics with 2 years of postdoctoral research training. Must have 1 year of training in on-line computing with PDP11 computer and RSX operating system and with scintillation counter hodoscopes and associated fast electronics, and 6 months of training in operating cryogenic systems. Forty hours per week; \$33,000 per year. Send résumés to: 7310 Woodward Avenue, Room 415, Detroit, MI 48202. Reference number 59186. Employer-paid ad.

### AVIAN BEHAVIORAL BIOLOGIST

The Department of Biology at the University of California, Los Angeles, invites applications for a tenure-track position in avian behavior. The appointment may be made at any rank. We are looking for outstanding candidates studying the physiological mechanisms of bird behavior. Although the search is not limited to any one area, the department is especially interested in those candidates with a strong interest in the neural, hormonal, and/or anatomical bases of natural avian behavior, combined with field ornithology. Responsibilities include the teaching of an undergraduate upper division course in modern ornithology. Candidates should submit curriculum vitae (including a list of publications, a summary of research and teaching objectives), and names and addresses of at least three references to:

Chair, Avian Biologist Search Committee  
Department of Biology  
University of California, Los Angeles  
Los Angeles, CA 90024

*The University of California is an Affirmative Action/Equal Opportunity Employer. We encourage applications from individuals of minority backgrounds and from women.* Closing date for applications is 1 February 1987.

### DEPARTMENT OF CHEMISTRY UNIVERSITY OF MONTANA

**Biochemistry, Assistant Professor** (tenure-track, search reopened) fall 1987. The successful candidate will have a Ph.D. and expertise in nucleic acid biochemistry or a closely related area. Evidence indicating ability to establish and maintain a vigorous research program and ability to teach graduate and undergraduate courses in biochemistry is required. Send curriculum vitae, a proposed research program, and three letters of recommendation to be received by 31 December 1986 to: Professor Walter E. Hill, Chemistry Department, University of Montana, Missoula, MT 59812.

**BIOLOGIST:** The Division of Science, Mathematics, and Engineering, University of South Carolina (USC) at Sumter, invites applications for a tenure-track position for fall 1987 for a broadly trained zoologist. Duties include teaching human anatomy and physiology for nursing students and the teaching of other freshman and sophomore courses emphasizing evolution, animal diversity, and ecology. A candidate with a demonstrated commitment to undergraduate education and a Ph.D. in biology is sought. To apply, send curriculum vitae, transcripts, and three letters of reference by 15 January 1987 to: Dr. Bob Nerbun, Chairman of Science, Mathematics, and Engineering, University of South Carolina at Sumter, Sumter, SC 29150-2498. USC-Sumter is an Affirmative Action/Equal Opportunity Employer.

**CELL BIOLOGIST-PHYSIOLOGIST.** Teach undergraduate courses in both fields and direct undergraduate research. Teach entry-level courses in liberal arts context. Ph.D. required. Prefer teaching experience, knowledge of computer data acquisition. Noncitizens must have permanent residency, work permit. *Affirmative Action/Equal Opportunity Employer.* Send curriculum vitae, transcripts, and three reference letters to: Dr. W. B. Julian, Dean's Office, Central College, Pella, IA 50219, by 1 January 1987.

## POSITIONS OPEN

### BIOPROCESSING ENGINEERING FACULTY POSITIONS

The College of Engineering at the University of Illinois at Urbana-Champaign has several tenure-track positions at the assistant/associate/full professor levels for its Bioprocess Engineering Laboratory, beginning in August 1987. The laboratory is a new College of Engineering unit that is part of a university initiative in the engineering aspects of biotechnology. The emphasis of the laboratory is on interdisciplinary engineering research on the aspects of biotechnology relating to the large-scale production of valuable products. Candidates should have a demonstrated record of success in obtaining, managing, and publishing the results from sponsored research. Desired research specialties include but are not limited to fermentations, bioprocesses, instrumentation and process control, biosensors, structured modeling of product formation, and large-scale mammalian- or plant-cell culture. Department affiliation will depend on the candidate's background and interests. Interested candidates should send a complete curriculum vitae and the names of at least three references to: Dr. Bruce E. Rittmann, Chairman, Bioprocess Engineering Search Committee, University of Illinois at Urbana-Champaign, 106 Engineering Hall, 1308 West Green Street, Urbana, IL 61801; telephone: 217-333-6964. In order to ensure full consideration, applications must be received by 2 February 1987. Interviews may be conducted during the application period. Applications will be accepted after 2 February 1987 and the search will remain open until the positions are filled. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

### BIOMEDICAL SCIENCES

Two tenure-accruing FACULTY POSITIONS at the rank of assistant professor are available in the Department of Biomedical Sciences, University of South Alabama for individuals with cross-disciplinary training in the basic medical sciences. Qualifications include a Ph.D. in a basic medical science discipline, a commitment to excellence in undergraduate teaching, and evidence of productivity in research. Postdoctoral training is preferred. Duties will include teaching in a cross-disciplinary undergraduate program in biomedical sciences and development of an active research program. Persons with backgrounds in anatomy, pharmacology, neurosciences, or in microbiology and immunology are particularly encouraged to apply, although consideration will be given to outstanding applicants regardless of discipline. Applicants should submit curriculum vitae, an outline of research plans, and the names and addresses of three references by 31 January 1987 to: Dr. Harold Jones, Chair, Department of Biomedical Sciences, University of South Alabama, Mobile, AL 36688. *Equal Employment Opportunity/Affirmative Action Employer.*

**CHAIRPERSON OF THE DEPARTMENT OF ZOOLOGY** to begin September 1987. Associate/full professor level. Duties: Department chair and associated administrative duties; research in evolutionary biology; teach in area of competence. Qualifications: Ph.D., publications in evolutionary biology, administrative experience in an academic setting, established reputation as a researcher, effective teacher. Presently, most departmental members (15) work with marine and freshwater organisms, and have strong ongoing programs in cell and developmental biology, ecology, and physiology. Preference will be given to an evolutionary biologist capable of cooperating with and enhancing these programs, as well as fostering active interdisciplinary relationships with other departments at the university. Send a letter of intent, curriculum vitae, and three supporting letters by 2 February 1987 to: Search Committee, Zoology Department, University of New Hampshire (UNH), Durham, NH 03824. UNH is an Affirmative Action/Equal Opportunity Employer.

**DEVELOPMENTAL BIOLOGIST.** Swarthmore College seeks to hire a 1-year leave replacement in developmental biology/embryology starting September 1987. Applicants should have research experience and have a strong commitment to undergraduate education. Interested persons should submit (i) curriculum vitae, (ii) statement of current teaching and research interests, and (iii) three letters of recommendation by 15 January 1987 to: Dr. Scott F. Gilbert, Department of Biology, Swarthmore College, Swarthmore, PA 19081. *Swarthmore College is an Equal Opportunity Employer.*

## POSITIONS OPEN

### UNIVERSITY OF QUEENSLAND CHAIR OF THEORETICAL PHYSICS

Applications are invited for this chair in the area of the interaction of radiation with matter. Theoretical and experimental research is currently being carried out within the Physics Department in quantum optics, laser physics, and astrophysics. Future plans for this area of research give high priority to two further academic appointments, one experimental and one theoretical, should funds become available in the next few years. Other research areas in the department include geophysics, space physics, solid state, and marine physics. Applicants must be able to present evidence of substantial research achievement in the field of theoretical physics.

The appointee must demonstrate and encourage excellence in research and will be responsible to the head of the Physics Department for undergraduate and postgraduate teaching in the department in keeping with faculty board and departmental requirements. The appointee will also be expected to make a substantial contribution to the general administration of the department and the university.

Salary per annum: A\$58,348  
Closing date 15 February 1987.

Further information may be obtained from: Professor J. D. Whitehead, Head of the Physics Department. Brochure and application forms are available from: The Director, Personnel Services, University of Queensland, St. Lucia, Queensland, 4067, Australia. Please quote reference number 44386.

*The University of Queensland is an Equal Opportunity Employer*

The University of Pennsylvania, School of Dental Medicine, invites applications and nominations for the position of CHAIRPERSON (full time, tenure track) of the Physiology/Pharmacology Department to be filled by July 1987. The candidate should have a strong commitment to undergraduate/graduate teaching, some administrative experience in academic institutions, and an active and well-recognized research program. Preferred areas of research include, but are not limited to, various areas of cell biology (membrane physiology, cell surface interactions, and drug receptors) and basic mechanisms of inflammation and pain.

Interested individuals are encouraged to send curriculum vitae to:

Dr. Benjamin F. Hammond, Chair  
Physiology-Pharmacology Search Committee  
Telephone: 215-898-8781  
University of Pennsylvania  
School of Dental Medicine  
4001 Spruce Street  
Philadelphia, PA 19104

*The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer. Women and members of minority groups are encouraged to apply.*

**CHEMICAL OCEANOGRAPHY.** Tenure-track, assistant professor position in marine or atmospheric geochemistry available fall 1987. The position offers a 9-month, state-funded salary, mainly graduate level teaching, and the opportunity to develop a vigorous research program in a very congenial atmosphere. Send curriculum vitae, statement of research interests, and names of three references to: CHAIRMAN, Chemical Oceanography Search Committee, Department of Oceanography, The Florida State University, Tallahassee, FL 32306; telephone: 904-644-6700. *The Florida State University is an Equal Opportunity/Affirmative Action Employer.*

**CHEMIST, Organic:** head research team conducting R&D of new sources of natural flavor materials; use chromatographic extraction and separation techniques for recovery and purification of essential oils, flavor compositions and natural aroma chemicals; develop new natural basic products for flavor and fragrance creation; design and develop new cost-effective commercial processes and equipment. Ph.D. in organic chemistry required; 4 years of experience required; 40 hours; \$42,500 per year; JO number NY8025672, DOT 022.061.010; Mail résumé to: New York State Job Service, JO number NY8025672, 175 Remsen Street, 2nd Floor, Brooklyn, NY 11201.



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**BioGenex Laboratories, Dept. P-1**  
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## DEAN

**College of Computer, Mathematical, and  
Physical Sciences**

**UNIVERSITY OF MARYLAND, COLLEGE PARK**

Applications and nominations are invited for the position of Dean of the College of Computer, Mathematical, and Physical Sciences at the University of Maryland, College Park campus. The Dean of the College provides both academic and administrative leadership to the College and reports directly to the Vice Chancellor for Academic Affairs and Provost.

The College of Computer, Mathematical, and Physical Sciences consists of the departments of Computer Science, Geology, Mathematics, Meteorology, and Physics and Astronomy, as well as the Applied Mathematics Program, the Center for Automation Research, the Chemical Physics program, the Institute for Physical Science and Technology, the Institute for Advanced Computer Studies, and (jointly with Engineering) the Laboratory for Plasma and Fusion Energy Studies. The College employs 460 faculty members and approximately 800 support personnel. Presently about 3000 undergraduate students and 800 graduate students are enrolled in degree programs within the College. In 1985-86 researchers in the College were awarded approximately \$29,000,000 in external grants and contracts. The state-supported budget for the College for this period was about \$20,000,000.

A candidate should have an earned doctorate and be eligible for appointment as a faculty member in a department of the College at the rank of Professor with tenure. He or she should have successful experience as a teacher at the undergraduate and graduate levels and a distinguished record of scholarly research. Candidates should also have demonstrated leadership ability and management skills.

Applications or nominations for the position are invited. Applications should include a complete resume or curriculum vitae and the names and addresses of at least four references. All applications and nominations should be submitted before January 15, 1987 to:

**William W. Destler**  
C.M.P.S. Dean Search Committee  
Electrical Engineering Department  
University of Maryland  
College Park, Maryland 20742

*The University of Maryland is an equal opportunity/affirmative action employer. Women and minority candidates are encouraged to apply.*



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Further information and application forms may be obtained by writing to the Howard Hughes Medical Institute, Research Scholars Program, 9101 Old Georgetown Road, Bethesda, Maryland 20814.

Applications invited from students in all American Medical Schools.

Your request for the application information should be received by December 31, 1986.

Final deadline for return of all application materials is January 15th, 1987.

## POSITIONS OPEN

### FIELD DIRECTOR—CARIBBEAN MARINE BIOLOGY AND RESOURCE MANAGEMENT THE SCHOOL FOR FIELD STUDIES

Will have direct responsibility for all phases of year-round undergraduate marine field studies program, overseeing three to four faculty and approximately 25 students. Requirements: Ph.D., demonstrated administrative/management abilities, and Caribbean experience with preferred college level teaching/research in applied resource management. Nine months spent at site, 2 in Beverly, MA. Salary \$24,000, plus living expenses. Résumés to: **SFS 376 Hale Street, Beverly, MA 01915.** *Equal Opportunity Employer.*

### DIRECTOR, ATMOSPHERIC SCIENCES PROGRAM

**University of North Carolina at Asheville (UNCA)—SEARCH EXTENDED.** Nominations and applications are invited for the position of director, Atmospheric Sciences Program, University of North Carolina at Asheville beginning fall 1987. UNCA offers a B.S. in atmospheric science with concentrations in climatology and weather forecasting. The successful candidate will provide administrative leadership to a rapidly growing program of 39 majors and 2 meteorology faculty with ties to the National Climatic Data Center. Qualifications include an earned doctorate in meteorology or climatology and teaching experience. Preference given to those candidates with previous administrative experience. Appointment for this tenure-track position is at associate/full professor level, depending on qualifications and experience. Send résumé, names of three references, and any other relevant supporting material by 1 February 1987 to: **Dr. Thomas R. Cochran, Atmospheric Sciences Search Committee, UNC-Asheville, 1 University Heights, Asheville, NC 28804-3299.** *UNCA is an Equal Opportunity/Affirmative Action Employer.*

### DIRECTOR UNIVERSITY OF TENNESSEE (UT) OAK RIDGE GRADUATE SCHOOL OF BIOMEDICAL SCIENCES

UT/Oak Ridge Graduate School of Biomedical Sciences invites persons of established scientific stature to apply for the position of director. This program enjoys school status within the University of Tennessee, Knoxville (UTK), and support from Oak Ridge National Laboratory (ORNL). The school is located within the ORNL Biology Division and has access to resources of this major federal laboratory. Major research strengths include molecular and mammalian genetics and carcinogenesis. This 20-year-old program involves 30 faculty and 40 graduate students, most at the Ph.D. level. Responsibilities of the position include administration of the school and continuation of an active research program. The appointment will be at the full professor level, tenurable through a life sciences department at the university. Send letter of interest and résumé by 1 March 1987 to: **Associate Dean H. McSweeney, 226 Ayres Hall, University of Tennessee, Knoxville, TN 37996.** *UT is an Equal Opportunity/Affirmative Action Employer.*

### DIRECTOR WATER RESOURCES LABORATORY UNIVERSITY OF LOUISVILLE

Director of the Water Resources Laboratory, College of Arts and Sciences, will be a tenured faculty member in the Department of Biology beginning summer 1987 and will manage the laboratory, which conducts research in aquatic biology, hydrology, and water chemistry. Director will be an aquatic scientist with expertise in a suitable discipline (such as, aquatic biology, limnology, toxicology, and so forth). Ability to obtain grants and contracts for research is essential. Teaching responsibilities will include one course per semester and supervision of graduate (M.S. and Ph.D.) students in Department of Biology. Applications must be received by 20 January 1987. Submit curriculum vitae, list of publications, and names, addresses, and telephone numbers of at least four persons from whom letters of reference may be obtained to: **Dr. Burt L. Monroe, Jr., Chair, Search Committee, Department of Biology, University of Louisville, Louisville, KY 40292.** *Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### EASTERN VIRGINIA MEDICAL SCHOOL Administrative Director of Microsurgical Research Center

The Eastern Virginia Medical School is presently inviting applications to fill the **administrative directorship** of the Microsurgical Research Center (MRC). The MRC is a modern, fully equipped research facility whose mission is to promote interdisciplinary teaching, as well as basic and clinical research and research training in the micro-neurosurgical and microsurgical disciplines. The administrative director will be responsible for the daily logistical operations of the laboratory and will work closely with the chairman of plastic surgery and a scientific overview committee in long-term planning and decision making of MRC research and teaching programs. The successful candidate should possess either a Ph.D. or an M.D. coupled with evidence of scholarly achievement in an academic setting with preferred experience as a neuroscientist. A senior scientist with an established history of extramural support will be viewed favorably. Send a letter of intent, a current curriculum vitae, plus three letters of recommendation before 31 December 1986 to:

**James H. Carraway, M.D.  
Eastern Virginia Medical School  
P.O. Box 1980  
Norfolk, VA 23501**

*Eastern Virginia Medical School is an Affirmative Action/Equal Opportunity Employer.*

### DIRECTOR OF HUMAN IN-VITRO FERTILIZATION LABORATORY

Applications are invited for a tenure-track position at the assistant to professor level starting 1 July 1987. The position requires a Ph.D. degree and previous experience in successfully running human In-Vitro Fertilization Laboratory. The position requires planning and organizing an I.V.F. laboratory, hiring, and training of laboratory personnel and developing research programs related to the field. Experience in semen analysis, embryology, tissue culture, embryo cryopreservation, and animal testing is desirable. Applicants should be experienced in research and education and possess the ability to attract grants. Salary is negotiable. Appointment will be made in accordance with Canadian immigration requirements. *Preference would be given to Canadian citizens and permanent residents.* Please send replies to: **Dr. Dan Tulchinsky, Obstetrician Gynecologist-in-Chief, Department of Obstetrics and Gynecology, Montreal General Hospital, 1650 Cedar Avenue, Montreal, Quebec, Canada H3G 1A4.**

### EXECUTIVE DIRECTOR KALAMAZOO NATURE CENTER KALAMAZOO, MICHIGAN

The center is a private, nonprofit membership corporation dedicated to research, education, and conservation, especially in natural history. It is owned by its 11,000 members, governed by a 15-member elected Board of Trustees, employs 19 full-time staff members, and has an annual operating budget of over \$600,000. The center is 6 miles from downtown Kalamazoo, a progressive city supportive of culture and education. **DUTIES** are to provide creative leadership and planning for public involvement in programs of environmental and natural history research, education, and conservation; to oversee routine functions of the center, including personnel matters and budget; to provide stewardship for 3200 acres of land and water; to report to president of Board of Trustees and provide Board-staff liaison; and to promote community awareness and involvement. **QUALIFICATIONS** include earned doctorate (ecology or related discipline); at least 3 years of experience with a natural history or environmental organization; effective written and oral communication skills; strong leadership and managerial skills. **SALARY** competitive, appropriate to qualifications. **QUALIFIED CANDIDATE** should (i) submit résumé and narrative (500 word maximum) emphasizing qualifications for and approach to the position, (ii) submit three letters of reference, and (iii) send to:

**Search Committee, Kalamazoo Nature Center  
7000 North Westnedge Avenue  
Kalamazoo, MI 49007**

Application deadline is 15 January 1987. *Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

Environmental Division of a multiindustry corporation has employment opportunities for B.S., M.S., and Ph.D.'s with expertise in any of the following areas: **limnology, water quality, modeling, aquatic biology, fisheries, oceanography, and impact assessment.** All positions require good writing and communication skills. We offer a challenging, technical environment and an excellent benefits package including paid health, dental, and vision benefits; Performance Sharing Plan; educational benefits and a Christmas holiday shutdown. Please send résumé to: **Monica C. Ballard, Martin Marietta Environmental Systems, 9200 Rumsey Road, Columbia, MD 21045.** *Equal Opportunity Employer, M/F.*

**FACULTY POSITIONS AT ARIZONA STATE UNIVERSITY:** Applications are invited for assistant professorships in solid-state structural chemistry; high-technology electronics materials chemistry; molecular biology/photophysics/biochemistry of photosynthesis; and chemical education. A senior-level appointment in solid-state structural chemistry will also be considered. The first three positions are in areas that have been targeted for further development in a department committed to excellence in the interdisciplinary fields of geochemistry, solid-state, and bioorganic chemistry. Candidates should have outstanding potential for excellence in both research and teaching. *Applications from women and members of minority groups are encouraged.* Applicants should submit curriculum vitae, summary of past accomplishments, brief statement of research plans, and teaching interests, and three letters of recommendation to: **Professor W. S. Glaunsinger, Chairman, Department of Chemistry, Arizona State University, Tempe, AZ 85287.** *Arizona State University is an Equal Opportunity/Affirmative Action Employer.* Review of applications will begin after 22 December 1986, and continue until filled.

### FACULTY POSITION

Tenure-track appointment as **assistant professor, associate professor, or professor** to the School of Library and Information Studies. The school is committed to progress and research in all phases of information science and studies and seeks applicants from research-oriented scholars who wish to be part of a community that views its mission as a continuing study and redefinition of these areas. Applicants sought from specialties within librarianship, as well as from related fields. Appointee will be expected to advise students in the MLIS, Ph.D., DLIS, and post-MLIS Certificate programs; engage in research and publication; and share in school, university, and/or public service. Ability to teach one or more core courses (bibliographic organization, information retrieval, and management) desirable, though not required. Qualifications: teaching ability; relevant practical experience; Ph.D. or comparable evidence of research ability. Title and salary depend on qualifications. Available 1 July 1987, or by arrangement. Applications and nominations postmarked by midnight, Wednesday, 1 April 1987, to: **Robert C. Berring, Dean, School of Library and Information Studies, University of California, Berkeley, CA 94720.** *The University of California is an Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITION IN PHARMACEUTICS

The Washington State University College of Pharmacy has available an annual appointment, tenure-track, assistant professor level position, to begin 1 September 1987. A professional degree in pharmacy is preferred and a Ph.D. in pharmaceuticals or a related discipline is required. Postdoctoral experience is desirable. The candidate should have a strong background in physical pharmacy, biopharmaceutics, or pharmacokinetics. The position will involve teaching pharmaceuticals to professional pharmacy students and teaching and direction of graduate students in the pharmacology/toxicology graduate program. Development of a vigorous, independent research program is expected. Salary will depend on the qualifications and experience of the candidate. Send a letter of application, curriculum vitae, a summary of research interests and the names, addresses and telephone numbers of three references to: **Dr. William L. Hayton, College of Pharmacy, Washington State University, Pullman, WA 99164-6510; telephone: 509-335-5622.** Screening will begin 15 February 1987, and applications will be received until the position is filled.

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Applicants must possess a BS or MS in biochemistry, chemistry, biology or the equivalent with broad training and/or experience in current biochemical techniques.

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BS/MS in molecular and cellular biology, microbiology or biochemistry. Experience with recombinant DNA techniques such as cloning, nucleic acid sequencing, and nucleic acid hybridization analysis is required. Research experience in the following areas is desirable:

- Animal Virus Systems, especially retroviruses
- Yeast Systems
- Mammalian Systems

### CELL BIOLOGY / PHARMACOLOGY

BS/MS in cell biology, physiology and/or pharmacology. Experience with in vitro and in vivo assays involving ligand-receptor interactions, growth factor function and/or enzymology. Research experience in the following areas is desirable:

- Neurobiology
- Pulmonary/Respiratory Biology
- Cardiovascular Biology

We offer a comprehensive benefits package and competitive salaries. For confidential consideration, please submit your curriculum vitae, a statement of research interests and goals, and the names of three professional references to **SIBIA, Department 4055, 505 Coast Boulevard South, La Jolla, CA 92037.**

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## POSITIONS OPEN

### FACULTY POSITIONS IN BIOLOGY

Two tenure-track positions at level of assistant or associate professor in **DEVELOPMENTAL BIOLOGY** and **VERTEBRATE EVOLUTIONARY BIOLOGY**. The successful candidates will be expected to provide instruction in both undergraduate and graduate courses, including participation in introductory course on rotating basis, supervise M.A. thesis research, and maintain ongoing research programs. Ph.D. degree required; postdoctoral experience preferred. Academic year salary: Assistant professor: \$25,810 to \$31,040; Associate professor: \$32,500 to \$39,165. Effective date: 24 August 1987.

**Developmental Biologist:** Emphasis on molecular aspects of morphogenesis/tissue differentiation in multicellular organisms. Expected to teach courses such as developmental biology and cell biology, and participate in gene engineering program.

**Vertebrate Evolutionary Biologist:** Field-oriented evolutionary biologist with emphasis in terrestrial vertebrates. Expected to teach courses such as mammalogy, comparative anatomy, and evolution. Applicants should submit curriculum vitae and statement of career goals, and should arrange for three letters of reference to be sent by 20 January 1987 to:

Developmental Biology Search Committee or  
Evolutionary Biology Search Committee  
Department of Biology  
San Francisco State University  
San Francisco, CA 94132.  
*San Francisco State University is an  
Affirmative Action/Equal Opportunity Employer.*

### TENURE-TRACK FACULTY POSITION IN BIOCHEMISTRY

The Department of Biochemistry at the University of Wisconsin-Madison invites applicants for a position as **assistant professor** with emphasis in the area of the biochemistry of animal cells or systems. Candidates must have demonstrated excellence and independence in biochemical research, and have a strong background in biochemistry. The successful candidate will be expected to develop a vigorous and independent research program and participate in the undergraduate and graduate teaching programs in the department. Applications, including curriculum vitae and a statement of plans for future research, should be sent to: **Dr. W. S. Reznikoff, Chairperson, Department of Biochemistry, University of Wisconsin-Madison, Madison, WI 53706**. In addition, candidates should have letters sent from three people familiar with them and their work. Applications should be received by 15 January 1987 in order to guarantee consideration. *The university is an Affirmative Action/Equal Opportunity Employer, and applications are encouraged from women and minorities.*

**FACULTY POSITION—BIOCHEMIST.** Tenure-track opening at the **assistant or associate professor** level in the Department of Chemistry and Biochemistry at Texas Tech University for the fall semester of 1987. Minimum qualifications include a Ph.D. degree and postdoctoral experience. Candidates must demonstrate the ability to initiate an aggressive, independent research program and to teach at both the graduate and undergraduate levels. By 16 February 1987, applicants should forward a résumé and description of proposed research and arrange to have three letters of recommendation sent to: **Professor David B. Knaff, Department of Chemistry and Biochemistry, Texas Tech University, Lubbock, TX 79409-4260.** *An Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITION CARDIOPULMONARY SCIENCES/ RESPIRATORY THERAPY

The University of South Alabama is seeking a Ph.D. **physiologist** with an emphasis in the cardiovascular area to assist in the development of its cardiopulmonary/respiratory therapy baccalaureate degree program. The faculty member will be expected to teach and to develop and to maintain an active research program. Interested persons should send curriculum vitae and names of three references to: **William Wojciechowski, Chair, Cardiopulmonary Sciences, Allied Health, USA Medical Center Campus, 2451 Fillingim Street, Mobile, AL 36617.** Deadline: 31 January 1987, or until filled.

*Equal Opportunity/Affirmative Action Employer*

## POSITIONS OPEN

### FACULTY POSITIONS BIOLOGICAL SCIENCES

Four tenure-track **assistant professor** positions anticipated for fall 1987 at a comprehensive university of 25,000 students, located in a pleasant community 60 miles west of Chicago. A Ph.D. and postdoctoral experience are required. All successful candidates will be expected to maintain a vigorous research program, direct graduate (M.S. and Ph.D.) students, and teach the equivalent of one course per semester including occasional involvement in introductory courses.

**PLANT PHYSIOLOGIST:** The successful candidate will have expertise in the organismal physiology of higher plants and will be expected to interact with the Plant Molecular Biology Center. To teach plant physiology and course(s) in his/her specialty.

**DEVELOPMENTAL BIOLOGIST/GENETICIST:** The successful candidate will have a research program in animal developmental biology using modern techniques. To teach developmental biology and course(s) in his/her specialty.

**COMPARATIVE PHYSIOLOGIST (INVERTEBRATE):** The successful candidate must have a broad knowledge of comparative physiology and a research program in invertebrate physiology. To teach comparative physiology, invertebrate zoology, and the physiology portion of the fundamentals of biology course.

**PARASITOLOGIST/PROTOZOOLOGIST:** Preference will be given to candidates with a research program in the molecular aspects of host-parasite interactions. To teach parasitology, protozoology, and the animal portion of the organismal diversity course.

Send curriculum vitae, statement of research goals, and three letters of reference by 15 January 1987 to: **Dr. Marvin J. Starzyk, Chairman, Department of Biological Sciences, Northern Illinois University, DeKalb, IL 60115-2861, telephone: 815-753-1753.** *The University is an Affirmative Action/Equal Opportunity Employer.*

### FACULTY POSITION

The Department of Kinesiology at the University of California, Los Angeles (UCLA), invites applications from individuals with research specialties in membranes and receptors of cardiac or skeletal muscle with an emphasis on molecular biology. This is a **tenure-track** position at the **assistant professor** level and is anticipated to start 1 July 1987. The appointee is expected to conduct an independent research program, teach in basic physiology and exercise physiology courses, and develop a graduate seminar in her/his area of specialty. Applicants must have a Ph.D. or M.D. degree, and have had at least 2 years of postdoctoral training or comparable experience. Submit curriculum vitae, including a statement of research interests to: **Professor R. James Barnard, Department of Kinesiology, 2871 Slichter Hall, UCLA, Los Angeles, CA 90024.** Deadline for receipt of application is 15 February 1987.

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

**FACULTY POSITION—New England Academic Medical Center** is seeking an individual to assume a leadership role in neurosurgery. Candidates should have evidence of significant research commitment and funding ability, as well as administrative talents and clinical credentials. Applicants should be Board-certified. Send letter of application and curriculum vitae and bibliography to: **Box 206, SCIENCE.** *Minority and female candidates are encouraged to apply. Equal Opportunity Employer.*

### FACULTY POSITION IN NEUROBIOLOGY

The Department of Biochemistry, Dartmouth Medical School, invites applications for a tenure-track position with appointment at the assistant professor level. Candidates should have two or more years of postdoctoral experience and a strong commitment to research. We seek an individual with primary research interests in neurobiology at the molecular/cellular level.

Please send curriculum vitae, a summary of research plans, and the names of three references to: **Search Committee, Department of Biochemistry, Dartmouth Medical School, Hanover, NH 03756.** *Dartmouth Medical School is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### FACULTY POSITION/AVIAN PATHOLOGIST

The Department of Animal Sciences at Rutgers University, invites applications for a tenure-track assistant professorship. Candidates for this position must have a D.V.M. An additional Ph.D. degree is desirable, but not mandatory, since the individual will have the opportunity to pursue such a degree in our university. The individual will be expected to provide diagnostic services to the New Jersey poultry industry, and to develop a research program in Avian Health and/or related areas capable of attracting competitive outside funding. The individual will have minimal teaching responsibility. Salary is negotiable and commensurate with experience. Candidates should submit an application, including curriculum vitae, and three letters of recommendation to: **Professor John Bezpa, Department of Animal Sciences, Rutgers University—Cook College, P.O. Box 231, New Brunswick, NJ 08903.** Application deadline: 1 February 1987. *Rutgers University is an Equal Opportunity/Affirmative Action Employer.*

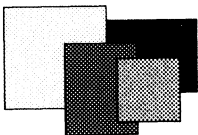
**TENURE-TRACK FACULTY POSITION—BIOCHEMISTRY/ORGANIC: ASSISTANT PROFESSOR,** beginning August 1987. Ph.D. in chemistry required, with a strong background in both biochemistry and organic chemistry; beginning at \$27,955 for 9 months, commensurate with experience. Postdoctoral research or teaching experience required. Successful applicant will carry a standard load of 60 percent teaching, 20 percent research, and 20 percent service; instructional duties will involve teaching three 3-hour courses (or equivalent) per semester; supervision of undergraduate research will be expected. The Chemistry Department consists of four full-time faculty with a wide range of research interests, and currently offers a bachelor's degree in chemistry, with a biochemistry option. Plans are being developed to begin a master's degree program in chemistry in the near future; currently the faculty work with some of the graduate students in the Biology Program who pursue advanced chemistry courses. Besides the degree program, the department supports a growing Engineering School, and a School of Nursing and Health Sciences.

Send curriculum vitae, statement of teaching and research goals, and three letters of recommendation, plus graduate transcripts to: **Personnel Services, University of Alaska, Anchorage (UAA), 3211 Providence Drive, Anchorage, AK 99508.** Closing date, 31 December 1986. *UAA is an Equal Opportunity/Affirmative Action Employer and educational institution.*

**TENURE-TRACK POSITION IN CELL BIOLOGY.** Section of Biochemistry, Molecular and Cell Biology, Cornell University. We seek applicants for a faculty position in cell biology (level to be determined by candidate's qualifications and experience). The successful candidate is expected to develop a vigorous research program and participate in the teaching of cell biology. The starting date could be as soon as September 1987. Please send curriculum vitae, a statement of previous and planned research, and arrange to have three letters of reference sent by 30 January 1987 to: **Dr. John Lis, Search Committee Chairman, Section of Biochemistry, Wing Hall, Cornell University, Ithaca, NY 14853.** *Cornell University is an Equal Opportunity/Affirmative Action Employer.*

**HAZARDOUS MATERIALS LABORATORY MANAGER**—Experienced scientist or engineer with demonstrated analytical laboratory and staff management skills. Contract research and/or industrial experience preferred. Will be responsible for planning and operation of a major \$9-million, 43,000-square-foot Hazardous Materials Laboratory. Salary \$40,000 to \$50,000 per annum. Closing date 1 January 1987. Submit résumé and three letters of reference to: **Dr. David L. Thomas, Hazardous Waste Research and Information Center, 1808 Woodfield Drive, Savoy, IL 61874.** *Equal Opportunity/Affirmative Action Employer.*

**ImClone Systems Inc.**, a growing Manhattan biotechnology company seeks **IMMUNOLOGISTS, MOLECULAR BIOLOGISTS, IMMUNOCHEMISTS AND QUALITY CONTROL/PRODUCTION** candidates with Ph.D. or M.D. and minimum of 2 years of postgraduate experience. Forward curriculum vitae to: **John Landes, ImClone Systems Inc., 180 Varick Street, New York, NY 10014.**



**More  
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Step Ahead**

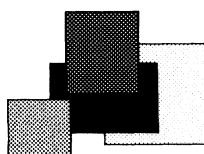
## **Research Scientist Immunology Laboratory**

A move to Collagen Corporation is more than a step forward in your career. It's a step into the future of biotechnology. Join us in this challenging opportunity.

Collaborating with other scientists, you will be part of a research team investigating the therapeutic uses of growth factors, lymphokines, and cytoleines. Your role will be to provide immunological expertise to this program. You should have a PhD and 2-3 years of post-doctoral experience in cellular immunology and experience with immunochemical techniques.

Collagen Corporation offers excellent growth potential and attractive salaries and benefits. To apply, please send your C.V., bibliography, and the names of several references to M. Ruselink, Human Resources, Collagen Corporation, 2500 Faber Place, Palo Alto, CA 94303. We are an equal opportunity employer.

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Corporation**



**Wayne State University**

## **DIRECTOR INSTITUTE FOR CHEMICAL TOXICOLOGY WAYNE STATE UNIVERSITY**

Wayne State University is seeking a director of its recently formed Institute for Chemical Toxicology (ICT). The Institute's major purpose is to address the short-term and long-term effects of toxic chemicals on human, animal and plant life through research, educational, and information programs. Research conducted within the Institute is expected to contribute to the development of new technologies and procedures for toxic substance control and management and to serve as a basis for new entrepreneurial activities.

The ICT's mission is interdisciplinary in scope and involves programs in the College of Pharmacy and Allied Health Professions, the basic science departments in the School of Medicine, the Departments of Biological Sciences, Chemistry, and Psychology in the College of Liberal Arts, and the Department of Chemical Engineering in the College of Engineering. The principal areas of research are: 1) development, validation, and application of biochemical markers of exposure to toxic chemicals in humans; 2) disposition and toxicokinetics of toxic chemicals in animals and humans; 3) toxicity of constituents of vehicle emissions; and 4) development of analytical methodologies for detection and monitoring of toxic chemicals. Funds are available within the Institute to employ research faculty, graduate research assistants, and research support staff. In addition, new programs consistent with the objectives of the Institute may be developed under the leadership of the Director.

The Director of the ICT will report to the Vice President for Research at Wayne State University and will have responsibility for:

- 1) Recruiting research faculty, research scientists, graduate students, and research support personnel to carry out the ICT's research programs.
- 2) Managing the ICT's budget consisting of \$816,000 per year in state funds in addition to funds obtained through industrial, federal, and private grants and contracts under the leadership of the Director.
- 3) Appointment of advisory committees with university and industrial representation.
- 4) Managing office and research support facilities for the technical activities of the ICT.
- 5) Disseminating information about the programs and accomplishments of the ICT.
- 6) Working with the Metropolitan Center for High Technology, a University-affiliated incubation center for new business ventures and expansion of existing business in advanced technology growth fields.
- 7) Coordinating the ICT's activities with state agencies responsible for advancing economic development in technical areas.

### **QUALIFICATIONS**

1. A demonstrated record of accomplishments as a researcher in the area of toxicology and as a research manager.
2. A Ph.D. degree and considerable experience in an appropriate area related to the goals of the ICT.
3. Ability to work effectively with persons of diverse interests and backgrounds in setting goals and implementing programs.
4. Proven organizational skills required for developing interdisciplinary programs.
5. Ability to identify public and private research funding opportunities and to assist in obtaining such support for the activities of the ICT.

It is presumed that the successful candidate will be appointed to the faculty of Wayne State University in an academic department appropriate to his/her qualifications and experience. The salary will be fully competitive and negotiable.

Letters of nomination or application with resumes should be sent to:

**Dr. Garrett T. Heberlein**  
Vice President for Research and  
Dean of the Graduate School  
Wayne State University  
1072 Mackenzie Hall  
Detroit, MI 48202

*Wayne State University is an Affirmative Action Equal Opportunity Employer.*

## **PROTEIN CHEMIST**

Immunex Corporation, a Seattle based biotechnology company pursuing research and development of protein pharmaceuticals and immunoregulatory therapeutic products, currently has an opening for a Protein Chemist.

The successful candidate will have a Ph.D., postdoctoral experience and interest in one or more of the following areas: chemical modification of proteins, structure-function relationships, chemical peptide synthesis, protein folding, hormone-receptor interactions, and the structure and function of proteases.

Immunex is a leader in the development of lymphokines as therapeutic agents. We offer excellent opportunity for career development in the superb Pacific Northwest environment, as well as competitive salaries and an excellent benefits package. For consideration, please submit C.V., 3 references and a list of publications to:

**Human Resources Officer  
IMMUNEX CORPORATION  
51 University Street, Seattle, WA 98101**  
Immunex Corporation is an equal opportunity employer.

**immunex**

## POSITIONS OPEN

### MSU-DOE PLANT RESEARCH LABORATORY Michigan State University Faculty Position in Plant Biology

The MSU-DOE Plant Research Laboratory has a tenure-track faculty position available which can be filled at the assistant or associate professor level. Applications are being sought from researchers who will be working toward the mechanistic understanding of fundamental questions in plant biology using modern experimental approaches of biochemistry, genetics, or cell and molecular biology.

The Plant Research Laboratory is operated under a contract from the U.S. Department of Energy and provides a stimulating atmosphere and excellent facilities for research in the plant sciences. Faculty members are jointly appointed in an appropriate academic department. Generous laboratory space and set-up support, as well as continuing research funding, will be provided.

Applicants should have postdoctoral experience with demonstrated productivity and evidence of potential for independent research; senior applicants should have an established, independent research program. In order to assure consideration, applications should be received preferably by 30 January 1987. Applications including curriculum vitae, description of research accomplishments and future interests, and three letters of recommendation should be sent to: **Dr. Hans Kende, Director, MSU-DOE Plant Research Laboratory, Michigan State University, East Lansing, MI 48824.** *Michigan State University is an Equal Opportunity/Affirmative Action Employer.*

### IMMUNOLOGIST MEDICAL COLLEGE OF OHIO

The Department of Microbiology is seeking an established immunologist to develop and run a new Immunology Program. This will involve the recruitment of a number of additional faculty members. The college is prepared to make a major investment of capital, start-up funds, and suitably equipped space for this program.

We are only interested in candidates who have a record of significant research in cellular immunology and/or in molecular immunology. The successful applicant also must be capable of attracting extramural funding. Please send curriculum vitae, three letters of recommendation, a statement of research goals, and ideas for development of the Immunology Program to: **Earl H. Freimer, M.D., Department of Microbiology, Medical College of Ohio, C.S. number 10008, Toledo, OH 43699.**

**LIMNOLOGIST. Assistant Professor of Zoology.** Tenure-track position beginning 1 September 1987 for a broadly trained zoologist with research interests in freshwater ecology. Earned doctorate required at time of appointment. Successful candidate is expected to develop a vigorous research program in quantitative and theoretical limnology, compete for outside funding, and contribute to graduate training. Duties include a one-semester limnology course, an introductory course, and development of seminar and/or advanced courses in evolutionary biology.

Send curriculum vitae, reprints, and three letters of recommendation by 15 January 1987 to: **Dr. C. Robert Shoop, Search Committee Chair, Assistant Professor, Zoology (Limnology) (020270) position, THE UNIVERSITY OF RHODE ISLAND, P.O. Box G, Kingston, RI 02881.** *An Affirmative Action/Equal Opportunity Employer, M/F.*

**MOLECULAR BIOLOGIST, DNA SYSTEMATICS**—A permanent research position is available in a laboratory studying the diagnosis, identification, classification, and population genetics of helminth and protozoan parasites of food animals. Candidates should have training and experience in recombinant DNA techniques and be interested in research in DNA systematics. Salary range \$32,568 to \$38,727, commensurate with experience. Applications including a résumé and examples of research papers should be sent by 15 January to: **Dr. J. R. Lichtenfels, U.S. Department of Agriculture (USDA), Agricultural Research Service, Building 1180, BARC-East, Beltsville, MD 20705.** Applications must be marked 7E004. *USDA is an Equal Opportunity Employer. Women and minorities are urged to apply.*

## POSITIONS OPEN

### FLOW CYTOMETRY RESEARCH SPECIALIST Biotechnology Center/Cell Science Laboratory University of Illinois at Urbana-Champaign

The University of Illinois at Urbana-Champaign has an immediate opening for a flow cytometry specialist. Qualifications include a bachelor's/master's degree in life sciences, or the equivalent combination of education and experience. The candidate should have some experience in operation and maintenance of flow cytometry instrumentation.

The operator will assist in the development of a new laboratory for flow cytometry serving the large biotechnology research community of the university. Duties will include the operation and maintenance of three Coulter EPICS flow cytometer/cell sorter systems. The research specialist will act as a consultant to investigators in their use of the flow cytometers, train students in the operation of the flow cytometers, supervise and schedule the use of the instruments, and assist in collection and handling of the data.

This is a full-time, academic professional position. Applications must be received by 5 January 1987 to receive full consideration. Send résumé to: **Dr. Steven S. Barham, Director, Cell Science Center, 407 South Goodwin Avenue, University of Illinois, Urbana, IL 61801; telephone: 217-244-0557.** *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

### HUMAN GENETICIST

**Position:** Reports to scientific director of a private, emerging high-tech medical firm in San Diego, specializing in human genetics.

**Experience:** Appropriate M.S. degree required; Ph.D. preferred; 2 to 5 years of genetic counseling; excellent written and verbal skills. Computer literate persons preferred. Reply to **Box 216, SCIENCE.**

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

**LABORATORY DIRECTOR, U.S. Grain Marketing Research Laboratory, Manhattan, Kansas.** ARS is seeking an individual from one of the following academic disciplines for the position of laboratory director of the U.S. Grain Marketing Research Laboratory: Research entomologist, research chemical engineer, agricultural engineer, research plant pathologist, research chemist, and microbiologist. In addition to directing a comprehensive research program on grain from harvest through storage and processing, the position requires conduct of personal research in the candidate's own area of specialization related to grain science. Candidate must have a background of successful leadership of research programs. Possession of the Ph.D. is desirable. Must be a U.S. citizen. Salary is commensurate with experience (\$53,308 to \$69,301). For information on the position, contact: **The Area Director's Office, Central Plains Area; telephone: 515-239-8414.** For information on application procedures/forms, contact: **Lee Triplett; telephone: 301-344-1863.** Applications in response to this advertisement should be marked 6N015. Inquiries must be received by 30 January 1987. *An Equal Opportunity Employer.*

### PRINCETON UNIVERSITY DEPARTMENT OF BIOLOGY

A position is open for a **LECTURER** (non-tenure-track) to be in charge of all the laboratories in the introductory biology courses which run throughout the academic year. The work would involve responsibility for the plans for each weekly laboratory, their preparation, and their supervision. The person will also supervise his or her support staff of preparators and the teaching assistants who run the laboratory sessions. Anyone wishing to apply should send his/her curriculum vitae and arrange to have two letters of recommendation sent. Address all material to: **E. Lechner, Secretary to the Search Committee, Department of Biology, Princeton University, Princeton, NJ 08544.**

**Deadline:** 19 December 1986

*An Equal Opportunity/Affirmative Action Employer*

## POSITIONS OPEN

**MACROMOLECULAR WORKBENCH PROJECT:** Department of Pharmaceutical Chemistry, School of Pharmacy, University of California, San Francisco (UCSF), seeks individuals at the postdoctoral and assistant research levels with experience in numeric, symbolic or graphical computing, and structures and interactions of biological molecules, energy calculations, and semiempirical modeling, to join an active, exciting and well-equipped research group (**R. Langridge, I. D. Kuntz, P. A. Kollman, F. Cohen, K. Dill, T. E. Ferrin, R. Abarbanel**) developing and using computational methods to predict protein tertiary structure from amino acid sequence. Send letter of application and résumé with names of three references to: **Professor Robert Langridge, Computer Graphics Laboratory, University of California, San Francisco, CA 94143-0446.** *UCSF is an Equal Opportunity Affirmative Action Employer. Women and minorities are encouraged to apply.*

**MARINE MICROBIOLOGIST.** The University of Texas at Austin Marine Science Institute has an opening for a state-funded **RESEARCH SCIENTIST.** Preference will be given to candidates studying microbial processes such as growth, production, and chemical transformation, using modern methods in ecology, physiology, biochemistry, and molecular biology. An understanding of the ecological ramifications of microbial processes in coastal waters and estuarine environments is essential. Successful applicants are expected to obtain extramural funding to develop an independent research program and to cooperate in development of field-oriented multidisciplinary projects. Candidates must have a Ph.D. and record of research accomplishments. Postdoctoral experience preferred.

Send letter with statement of research interests, curriculum vitae, and names of three references before 15 February 1987 to: **Dr. Robert S. Jones, Director, Marine Science Institute, The University of Texas at Austin, Port Aransas, TX 78373.**

*The University of Texas at Austin is an Equal Opportunity/Affirmative Action Employer.*

**MEDICAL IMAGING POSITION,** Stanford University. The Department of Electrical Engineering of Stanford University invites applications for a junior level research faculty appointment in the field of medical imaging. Applicant should have a background in medical imaging, in particular magnetic resonance imaging and is expected to teach courses in his/her specialty. The appointee will assist in the supervision of a large group of doctoral students in a dedicated Magnetic Resonance Laboratory, in addition to his/her own research activities. The medical imaging program is part of the Information Systems Laboratory which is engaged in a variety of advanced signal processing and imaging studies. Please submit detailed résumés, including names of references to: **Professor Albert Macovski, Department of Electrical Engineering, Durand Building Room 120, Stanford University, Stanford, CA 94305.** *Stanford University is an Affirmative Action/Equal Opportunity Employer and welcomes applications from women and minority groups.*

### MOLECULAR ANIMAL PARASITOLOGIST

The Department of Biological Sciences, University of Cincinnati, invites applications for an **ASSISTANT PROFESSOR TENURE-TRACK** position in the area of **MOLECULAR ANIMAL PARASITOLOGY**, beginning 1 September 1987. The candidate must have completed the doctorate; postdoctoral experience preferred. The successful candidate will be expected to develop an externally funded, independent research program in some area of animal parasitology employing molecular and/or immunochemical techniques. In addition, the candidate will participate in graduate and undergraduate education. Applicants must submit curriculum vitae, a one-page statement of research goals, and have at least three letters of reference submitted to: **Dr. Richard D. Karp, Molecular Animal Parasitologist Search Committee, Department of Biological Sciences, University of Cincinnati, Cincinnati, OH 45221.** Applications will be reviewed beginning 15 January 1987. *The University of Cincinnati is an Equal Opportunity/Affirmative Action Employer.*

## CONGRESSIONAL SCIENCE AND ENGINEERING FELLOWSHIPS

### Applications Invited

The American Association for the Advancement of Science (AAAS) invites applications for two 1-year Congressional Science and Engineering Fellowships it will offer for the period beginning 1 September 1987. The Fellowship Program provides an opportunity for accomplished and societally aware postdoctoral to mid-career scientists and engineers to participate in and contribute to the public policy-making processes within the Congress for approximately 1 year. Fellows work as special legislative assistants within the congressional staff system.

Persons may apply from any physical, biological, or behavioral science or any field of engineering. The term "science" is used broadly to include the system sciences, public health, and other technical professions. In addition to the fellowships awarded by the AAAS, about 15 others are given by other participating professional societies. The AAAS runs a year-long educational program for the set of Congressional Science and Engineering Fellows. Addresses of all participating societies are available from the address listed below.

The 1987-1988 AAAS Congressional Science and Engineering Fellows will receive a stipend of \$26,500; an additional \$1,500 is available for relocation expenses and travel in connection with the Program.

In order to obtain detailed information on the program and specific application requirements, write:

**Congressional Science and Engineering Fellows Program**  
**American Association for the Advancement of Science**  
1333 H Street, NW  
Washington, D.C. 20005

The deadline for application is 15 January 1987. The award will be announced around 1 May 1987.

## Biochemistry

### Plant Molecular Biologist

The Department of Biochemistry and the Agricultural Experiment Station of the University of California, Riverside, are seeking a new faculty member in the area of plant molecular biology. The successful candidate will hold a tenure-track appointment in the University at an appropriate level (Assistant, Associate or Full Professor) and will also hold a research appointment at a corresponding level in the Agricultural Experiment Station. The University of California, Riverside, has a distinguished record of accomplishments in the areas of agricultural research and plant biochemistry, both at the applied and basic research levels. The Riverside campus is located in a pleasant environment 60 miles east of the Los Angeles area. The campus currently has a large and active group of scientists engaged in plant molecular research in a number of cooperating departments of the College of Natural and Agricultural Sciences. The Department of Biochemistry wishes to further enhance development of its excellence in studies of the genetic composition and metabolic properties of plants. For this position, a background in plant biochemistry and molecular biology, and a demonstrated record of productivity in the general area of molecular biological techniques as applied to plants, is required. Both the strength of the existing research record and the potential for continuing strong contributions will be considered for each candidate. Applications should include a complete bibliography, funding history and the names and addresses of three references to be contacted by the search committee. Applications and nominations for the position should be sent preferably by December 15, 1986 to:

Richard A. Luben, Chair  
Plant Molecular Biologist Search Committee  
Dept. of Biochemistry, UCR  
Riverside, California 92521

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## RESEARCH ASSOCIATES

SIBIA is an established biotechnology company involved in a wide spectrum of innovative research programs. SIBIA, with a staff comprised of leading scientific staff members, provides an exceptional scientific research environment in which to work, plus a modern laboratory located near the ocean on Coast Boulevard in La Jolla. A broad range of research programs encourages multi-disciplinary interaction.

Applications are requested for Research Associates in:

### FERMENTATION

BS/MS in microbiology or fermentation technology. Industrial and yeast fermentations experience preferred, particularly involving recombinant yeast.

### PROTEIN CHEMISTRY / SEPARATIONS

BS/MS in biochemistry with experience in protein chemistry, enzymology and analytical and preparative techniques.

### MICROBIAL PHYSIOLOGY

BS/MS in microbiology or biochemistry with emphasis in microbial physiology. Experience with anaerobes, characterization, metabolism and physiology studies is desirable.

### TISSUE CULTURE and CELL BIOLOGY

BS/MS in cell biology. Experience with cell and tissue culture techniques involving primary and established cell lines and virology is required. Research experience in mammalian cell expression/production systems is desirable.

We offer a comprehensive benefits package and competitive salaries. For confidential consideration, please submit your curriculum vitae, a statement of research interests and goals, and the names of three professional references to **SIBIA, Department 4056, 505 Coast Boulevard South, La Jolla, CA 92037.**

# SIBIA

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Biotechnology/Industrial Associates, Inc.

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## POSITIONS OPEN

**MOLECULAR BIOLOGIST/GENETICIST.** Furman University Department of Biology has a tenure-track position at the level of assistant professor for an individual capable of developing a new course in molecular genetics and participating in introductory courses and others in areas of competency. Candidates must have the Ph.D. degree, a strong interest and aptitude in teaching undergraduates, and a commitment to involving students in an active research program. Furman is a very selective liberal arts school of 2500 students. Submit curriculum vitae, transcripts, statement of teaching competencies, and names of three references by 19 January 1987 to: **Dr. John A. Snyder, Chairman, Department of Biology, Furman University, Greenville, SC 29613.** *An Equal Opportunity Employer.*

**MOLECULAR BIOLOGIST:** The Division of Rheumatology, Department of Medicine, University of Colorado, Health Sciences Center, invites applications for a position at the beginning faculty level. Applicants should have completed at least 2 years of postdoctoral work with experience in the regulation of gene expression. The position is full-time research in a laboratory interested in regulation of synthesis of interleukin-1 in human monocytes. The position is available in 1987 with the latest starting date 1 July. Salary and start-up funds will be provided, but the appointee will be expected to participate in applying for research support. Please submit curriculum vitae, summary of research experiences, and a list of four references to: **William P. Arend, M.D., Professor and Head, Division of Rheumatology, Department of Medicine, University of Colorado Health Sciences Center Box B115, 4200 East Ninth Avenue, Denver, CO 80262.** *The University of Colorado is an Affirmative Action/Equal Opportunity Employer.*

## MOLECULAR BIOLOGISTS

The Academia Sinica in Taiwan has established a new Institute for Molecular Biology which began operation on 1 July 1986. Its goal is to create a world-class laboratory to carry out basic research in selected important areas of molecular biology. Research directions include: gene regulation and expression, especially following stress; molecular biology of developmental programming; structural biology which includes x-ray diffraction and NMR studies of proteins; molecular immunology and virology. A new laboratory building (72,000 square feet and greenhouses) has been constructed and is well-equipped. The building can house 100 workers, including approximately 30 principal investigators (P.I.'s). Nine P.I.'s will arrive in 1986. Twenty more will be recruited over the next 2 or 3 years. Candidates with Ph.D. or M.D. degrees should be persons with knowledge of the Chinese language, a good record of publications and scientific achievements, as well as postdoctoral research experience. Contact: **Dr. Ru Chih Huang, Department of Biology, The Johns Hopkins University, Baltimore, MD 21218; telephone: 301-338-7328 or Dr. Ray J. Wu, Section of Biochemistry, Molecular and Cell Biology, Cornell University, Ithaca, NY 14853; telephone: 607-255-5710** for inquiries. Application including the names of three references should be sent to: **Dr. James Wang, Director, Institute of Molecular Biology, Academia Sinica, Nankang, Taipei 115.**

**MOLECULAR VIROLOGIST:** Applications are invited for a tenure-track faculty position at the assistant professor level in the Department of Animal Science and Agricultural Biochemistry at the University of Delaware. Candidates should be interested in developing research program in one or more of the following areas: host-virus interactions, viral gene expression, viral recombination, or viral vector development. Preference will be given to candidates studying animal viruses of agricultural importance. The successful candidate will be responsible for the development of an upper level undergraduate/graduate level course in an area consistent with the individual's background and department's needs. Send a description of research interests and plans, curriculum vitae, and three letters of recommendation by 30 January 1987 to: **Dr. Robin Morgan, Department of Animal Science, 040 Townsend Hall, University of Delaware, Newark, DE 19717-1303.** *The UNIVERSITY OF DELAWARE is an Equal Opportunity Employer which encourages applications from minority groups and women.*

## POSITIONS OPEN

**MOLECULAR VIROLOGIST/IMMUNOLOGIST.** Active research group seeking M.D.'s with exceptional potential for developing productive, independent research in molecular virology and/or molecular immunology. Send curriculum vitae to: **John W. Warren, M.D., Division of Infectious Diseases, University of Maryland School of Medicine, 10 South Pine Street, Baltimore, MD 21201.**

## MOLECULAR BIOLOGY/IMMUNOLOGY

The Cellular Immunobiology Unit, Comprehensive Cancer Center, and Department of Microbiology invite applications for a tenure-earning faculty position as an assistant professor. We are seeking an individual with a strong background in genomic and cDNA cloning who will develop a strong, independent research program and interact with other members of the unit interested in normal and abnormal development of lymphoid and myeloid cells.

These units, among the most well funded in the nation, provide a stimulating scientific environment and administer several NIH Institutional Fellowship programs that are available to provide stipend support for predoctoral and postdoctoral students.

The basic science departments of the University of Alabama at Birmingham Medical Center continue to recruit outstanding faculty with strong research programs in biochemistry, cellular biology and physiology, immunology, animal virology, and other areas. A particular strength of the institution is the close cooperation between clinical and basic science researchers in areas such as cancer biology, arthritis and rheumatoid diseases, immunodeficiency disorders, bacterial and viral diseases, oral biology, and muscular-skeletal disorders.

Applicants should submit curriculum vitae, a statement of research plans, and the names of three people from whom letters of recommendation can be requested. Applications should be sent to: **Dr. Max Cooper, Chairman, Molecular Biology/Immunology Search Committee, Cellular Immunobiology Unit, University of Alabama at Birmingham, Birmingham, AL 35294.**

*An Equal Opportunity/Affirmative Action Employer*

## PHYSIOLOGY Assistant Professor Tenure-Track

Position starting August 1987. Ph.D. and some college teaching experience required. Teaching responsibilities include courses in animal physiology, human physiology, and human anatomy and physiology. Minimum salary \$24,000. Send curriculum vitae, statement of teaching experience and philosophy, transcripts, and three letters of reference to: **Dr. Jerry Carpenter, Chairman, Department of Biological Sciences, NORTHERN KENTUCKY UNIVERSITY (NKU), Highland Heights, KY 41076.** Application postmark deadline: 9 January 1987.

*NKU is an Affirmative Action/Equal Opportunity Employer and actively seeks the candidacy of minorities and women.*

## PLANT MOLECULAR BIOLOGIST

Doctoral department of 30 faculty and 80 graduate students announces a tenure-track position at the rank of assistant or associate professor. The successful candidate will become the sixth member of an active molecular biology group. He/she will be expected to participate in the instructional program, advise graduate students, and establish a strong, externally funded research program in some aspect of plant molecular biology. Send résumé, reprints, and the names of at least four references to: **Reginald Noble, Department of Biological Sciences, Bowling Green State University (BGSU), Bowling Green, OH 43403,** by 15 January 1987. *BGSU is an Affirmative Action/Equal Opportunity Employer.*

## EMBRYOLOGY POSTDOCTORAL POSITION

Available immediately for 2 years for a project studying the viability of mouse and pig embryos using micromanipulation, embryo transfer, and twinning techniques. Send curriculum vitae and references to: **Dr. V. Papaioannou, Department of Pathology, Tufts University School of Medicine and Veterinary Medicine, 136 Harrison Avenue, Boston, MA 02111.** *Tufts University is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### POLICY ANALYST

**Lawrence Berkeley Laboratory (LBL)** is seeking an individual to lead an effort to establish a research group dealing with environmental policy issues. The research group will consist of LBL professionals working in close collaboration with University of California (UC) and Stanford faculty and research staff, researchers from Lawrence Livermore National Laboratory (LLNL), and leading researchers from other institutions. Initially, the individual will organize and coordinate work on a monograph, co-authored by researchers from UC, Stanford, LBL, and LLNL, assessing environmental policy research issues. The individual will also be expected to establish contacts with appropriate agencies leading to the support for a long-term effort on different aspects of environmental policy research. The individual selected will be expected to take considerable initiative both carrying out the initial work, establishing a collaboration to write a high-quality monograph on environmental policy research, and in establishing funding for an ongoing activity. Requires an advanced degree (Ph.D. strongly preferred) in environmental science, policy research, or physical science; substantial experience performing and/or leading research in areas related to environmental policy; demonstrated leadership, scientific, and managerial talent; experience and talent in interacting with high-level persons in government and private firms; and excellent organizational skills.

Send résumés to: **Employment Office, 90-1042, Lawrence Berkeley Laboratory, 1 Cyclotron Road, Berkeley, CA 94702.** Please refer to Job number B/3948. *An Equal Opportunity Employer, M/F/H.*

### LAWRENCE BERKELEY LABORATORY

## POPULATION GENETICIST

The School of Biological Sciences, University of Nebraska-Lincoln, invites applications for a tenure-track faculty position at the assistant professor level, available August 1987. The successful candidate is expected to have a Ph.D., postdoctoral experience, and to develop an independently funded research program concerning fundamental problems of population genetics. Direction of graduate students and participation in graduate and undergraduate teaching is expected.

Send curriculum vitae, statement of proposed research, two to three representative reprints, and arrange to have three letters of reference sent to: **Dr. K. H. Keeler, Population Genetics Search, School of Biological Sciences, University of Nebraska-Lincoln, Lincoln, NE 68588-0118.**

Evaluation of candidates will commence 16 January but applications will be accepted until the position is filled. *Affirmative Action/Equal Opportunity Employer.*

## POSTDOCTORAL ASSOCIATE

Research in gastric carcinogenesis. The Division of Comparative Medicine at the Massachusetts Institute of Technology has an immediate opening for a postdoctoral associate position to conduct research on intragastric nitrosation and predicative modeling of gastric carcinogenesis in laboratory animals. Responsibilities include assisting in surgery and preparation and analysis of biological specimens for biochemical analysis. The qualified applicant should have experience with laboratory animal surgery and manipulation, training in physiology, and knowledge of techniques for biochemical evaluation. A D.V.M. degree or equivalent is required. Applications and the names of three references should be addressed to: **Dr. James G. Fox, Professor and Director, Division of Comparative Medicine, Massachusetts Institute of Technology, 37 Vassar Street, 45-105, Cambridge, MA 02139.** *MIT is an Equal Opportunity/Affirmative Action Employer.*

**POSITION IN CALIFORNIA** available for a POSTDOCTORAL FELLOW interested in protein chemistry and in the structure and function of the major histocompatibility complex. Research involves purification and microsequencing of the class I and IV antigens of the avian MHC and cloning through expression vectors. Curriculum vitae and three letters of recommendation should be sent to: **Dr. M. M. Miller, Department of Research Resources, Beckman Research Institute of the City of Hope, Duarte, CA 91010.**



**PRESIDENT**



GEORGIA TECH 1885-1985

GEORGIA TECH 1885-1985

## GEORGIA INSTITUTE OF TECHNOLOGY

The Board of Regents of the University System of Georgia announces its search for a new President at the Georgia Institute of Technology. The term of office will begin July 1, 1987, or as soon thereafter as possible.

Georgia Tech, located on a 320 acre campus near downtown Atlanta, emphasizes education for careers in engineering, the sciences, management, architecture, and related subjects. It has the only engineering college in the 34 unit University System of Georgia. Georgia Tech's current enrollment is 11,500, including 8900 undergraduate and 2600 graduate students studying in programs which lead to 27 bachelor's, 32 master's and 24 doctoral degrees distributed among four colleges - Architecture, Engineering, Management, and Sciences and Liberal Studies. About 60 per cent of the students come from Georgia with the remainder representing all 49 other states and 89 countries. More than 2000 are women, and approximately 11 per cent are minority students. (Georgia Tech graduated more minority engineers than any other school in the nation in 1983/84.) In Fall 1986 the SAT scores of the entering freshmen averaged more than 1180. During the previous academic year 1786 bachelor's, 710 master's and 83 doctoral degrees were conferred. The academic units of the Institute employ more than 750 faculty. Central to the Institute's research thrust is the Georgia Tech Research Institute consisting of seven laboratories with 560 research faculty. Georgia Tech ranks first in the nation among public universities for engineering research and development expenditures and for industry-supported R&D, with total research expenditures of more than 100 million dollars during the past year. It has an Advanced Technology Development Center, and 18 interdisciplinary research centers. A Centennial Capital Campaign begun in 1985 has raised in excess of 123 million dollars for the Institute.

Candidates must have an earned doctorate or the equivalent and must have demonstrated intellectual leadership. Teaching, research, and academic administrative experience are highly desirable.

Nominations should include the nominee's address. Applications should include a curriculum vitae and the names and addresses of five references.

The deadline is March 1, 1987, for all applications and nominations, which should be addressed to:

**Dr. H. Dean Propst**  
Chancellor, University System of Georgia  
244 Washington Street, S.W.  
Atlanta, GA 30334

THE GEORGIA INSTITUTE OF TECHNOLOGY  
IS AN EQUAL OPPORTUNITY, AFFIRMATIVE ACTION EMPLOYER



## Marine Biological Laboratory Fellowships — Summer 1987

**Robert Day Allen Fellowship**—cell biology

**Frederik B. Bang Fellowship**—invertebrate pathology

**Frank A. Brown, Jr. Memorial Readership**—for library research

**Stephen W. Kuffler Fellowship**—neuroscience

**H. B. Steinbach Fellowships**—all fields

**MBL Summer Fellowships**—all fields

These fellowships support independent research. For further details, contact the Office of Sponsored Programs, MBL, Woods Hole, MA 02543. (617) 548-3705 x 216.

**DEADLINE: January 15, 1987**

## U.S. PATENT AND TRADEMARK OFFICE

### POSITION:

#### Microbiologist/Patent Examiner

Opportunity involves the scientific and legal evaluation of patent applications involving recombinant DNA, molecular and cellular immunology, molecular genetics, cell biology, microorganisms, cell culture, fermentation, enzymology or clinical chemistry.

### QUALIFICATIONS:

A full 4-year or longer professional curriculum in an accredited college or university leading to a Bachelor's Degree or higher with specific study in Molecular Biology, Biochemistry, Immunology, Microbiology or cell Biology.

A Ph.D. or M.S. degree with relevant research experience is preferred. A B.S. degree with significant research experience will be considered.

Research Experience in any of the following areas would be beneficial: DNA cloning, gene expression, sequencing techniques, hybridoma technologies, monoclonal antibody applications, mammalian or plant cell lines, cell culture, immunoassays, hybridization techniques, fermentation, enzymatic reactions, diagnostics and automation of clinical analysis.

### SALARY:

Dependent upon experience and qualifications.

### LOCATION OF POSITION:

Arlington, VA

For further information contact:

**Nancy Strother**  
Patent and Trademark Office  
Office of Personnel, C&E  
CPK 1, Suite 700  
Washington, D.C. 20231  
703-557-1244



## POSITIONS OPEN

### POSTDOCTORAL FELLOW/ ASSISTANT PROFESSOR UNIVERSITY OF WASHINGTON

Ph.D. experienced with gene cloning, expression, and sequencing to join immunologists and protein biochemist emphasizing peptide synthesis to investigate pathogenesis, detection and prevention of intracellular infections, and basic mechanisms of antigen presentation. Position available to be commensurate with applicant's experience, publications, and funding potential. Send curriculum vitae and publications list and three references to: **Dr. Thomas M. Buchanan, Immunology Research Laboratory, Pacific Medical Center, 1200 12th Avenue South, Seattle, WA 98144.** *The University of Washington is an Equal Opportunity Employer.*

The Department of Medical Oncology of the City of Hope National Medical Center has an immediate opening for a senior **POSTDOCTORAL FELLOW** or **ASSISTANT PROFESSOR** level individual to pursue research on the molecular biology of anticancer drug resistance. Competitive salary and research financial support are available. Interested individuals with a Ph.D. degree in molecular biology or related fields and at least 1 to 2 years of postdoctoral experience should send a letter of inquiry and curriculum vitae to: **Dr. James Doroshow, Director, Department of Medical Oncology, 1500 East Duarte Road, Duarte, CA 91010.**

**POSTDOCTORAL POSITION** open in comparative endocrinology for study of structures and mechanisms of action of invertebrate neurosecretory and steroid hormones. Background in some combination of neuroendocrinology, pharmacology, peptide chemistry, assay methodology, and cell biology preferred. The position can be filled anytime January to September, 1987. Send résumé and names of three references to: **Dr. Eugene Spaziani, Biology Department, University of Iowa, Iowa City, IA 52242.**

**POSTDOCTORAL POSITION** available immediately for investigations on the mechanism of regulation of actomyosin ATPase of striated and smooth muscle and mechanisms in cell motility. Send curriculum vitae and references to:

**Dr. E. W. Taylor**  
Department of Molecular Genetics and Cell Biology  
University of Chicago  
920 East 58 Street  
Chicago, IL 60637

**POSTDOCTORAL RESEARCH ASSOCIATE IN TOXICOLOGY.** Research into requirement of folic acid for heme synthesis and its regulation by toxicants and hormones, and hemoprotein-mediated steroidogenesis. Well-equipped laboratory facilities. Funded by NIH. Application, curriculum vitae, and three letters of reference to be received by 2 February 1987 to: **Dr. W. N. Piper, Toxicology Program, University of Michigan School of Public Health, 109 South Observatory Street, Ann Arbor, MI 48109.**

**POSTDOCTORAL RESEARCH ASSOCIATE** position available immediately to study role of brain beta-endorphin in nicotine dependency or in central cardiovascular regulation. Recent Ph.D. in pharmacology or related science needed, with experience in opioid immunoassay and preference for those experienced in biochemical, behavioral, or cardiovascular pharmacology of opioid peptides or nicotine. Send curriculum vitae and three references to: **Dr. A. J. Ingenito, Department of Pharmacology, School of Medicine, East Carolina University, Greenville, NC 27834.**

### POSTDOCTORAL RESEARCH

Position available immediately to study the cellular and molecular mechanics of human genotoxicology. Responsibilities include characterizing DNA damage by ultra-sensitive immunotechniques, DNA repair, gene cloning, and analysis in human epithelial cells. Individuals should have training in molecular or cellular biology. Salary negotiable. Send résumé to: **Steven M. D'Ambrosio, Ph.D., The Ohio State University, College of Medicine, 103 Wiseman Hall, 400 West 12 Avenue, Columbus, OH 43210.**

*An Equal Opportunity Employer*

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately for 2 years. NIH-funded project is on morphometric studies of cellular and microvascular changes in rat myocardium related to aging, exercise, hypertension, diabetes, and ischemic cardiomyopathy. Experience in cardiovascular pathology and/or physiology preferred. Please send curriculum vitae and three letters of recommendation to: **Dr. Alden V. Loud, Department of Pathology, New York Medical College, Valhalla, NY 10595.**

**POSTDOCTORAL POSITION AVAILABLE** to study DNA replication and cellular aging in yeast. Experience in yeast genetics and recombinant DNA techniques is desirable. Send curriculum vitae, including bibliography, and have three letters of reference sent to: **Dr. S. M. Jazwinski, Department of Biochemistry and Molecular Biology, Louisiana State University Medical Center, 1901 Perdido Street, New Orleans, LA 70112.** *LSUMC is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** in chemical carcinogenesis available immediately for a well-trained recent Ph.D. pharmacologist/biochemical toxicologist to study DNA damage and repair during pregnancy by the <sup>32</sup>P-postlabeling method. Send curriculum vitae and names of three references to: **Dr. L.-J. W. Lu, Department of Pharmacology, Baylor College of Medicine, Houston, TX 77030.** *Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** for individual with Ph.D. in cell biology or biochemistry to study the role of calcium dependent proteinases and catheptic enzymes in muscle protein degradation. Experience in protein purification; poly and monoclonal antibody production desired. Duration will be from 1 to 2 years, depending on evaluation and availability of funds. Apply by 16 January to: **Dr. Michael Zeece, Department of Food Science and Technology, University of Nebraska-Lincoln, Lincoln, NE 68583-0919; 402-472-2827.** *Affirmative Action/Equal Opportunity Employer.* (This ad supercedes all previous ads.)

**POSTDOCTORAL POSITION IN CARDIAC ELECTROPHYSIOLOGY** to study neurotransmitter regulation of ionic currents in isolated myocytes. Ph.D. or M.D. with training in physiology or pharmacology required. Expertise in electrophysiological recording from single cells is desirable. Send curriculum vitae and three references to:

**Dr. Achilles Pappano**  
Pharmacology Department  
University of Connecticut Health Center  
Farmington, CT 06032

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

**POSTDOCTORAL RESEARCH ASSOCIATE** available February 1987. Recent Ph.D. in biochemistry or related field for studies to determine the intracellular metabolism and mechanism of interaction with DNA of platinum anticancer agents. Experience with recombinant DNA techniques, HPLC separation, and/or enzyme purification preferred. Send curriculum vitae with description of research background and interests and names and addresses of three references to: **Dr. Stephen Chaney, Department of Biochemistry, School of Medicine, University of North Carolina, Chapel Hill, NC 27514.** *Equal Opportunity/Affirmative Action Employer.*

### EXTRACELLULAR MATRIX MONOCLONAL ANTIBODIES

Position for U.S.-trained Ph.D. Postdoctoral/research associate is available to supervise a research core facility which generates and uses monoclonal antibodies to cellular and extracellular components of embryonic muscle, cartilage, and bone. An individual is desired who has experience in the generation and use of monoclonal antibodies and who can independently and creatively contribute to an exciting, well-equipped, and multifaceted research program in the development-to-aging transitions of mesenchymal tissues. Interested candidates should forward a detailed curriculum vitae, statement of current and future research interests, and three letters of recommendation to: **ARNOLD I. CAPLAN, Ph.D., Biology Department, Case Western Reserve University, Cleveland, OH 44106.** *An Equal Opportunity Employer.*

## POSITIONS OPEN

**HOWARD HUGHES MEDICAL INSTITUTE POSTDOCTORAL POSITION** immediately available for a recent doctoral level (Ph.D., M.D./Ph.D., or bench-motivated M.D.) graduate. The research interests are molecular immunogenetics, with strong emphasis on molecular mechanisms of human lymphokine gene regulation, T-cell activation, and class II MHC gene expression. My laboratory is new, spacious, fully equipped, and ideally located in the Immunology Section of the Howard Hughes Medical Institute at Baylor College of Medicine. Support facilities include FACS sorting, protein microsequencing, oligonucleotide synthesis, transgenic micromanipulation, and state-of-the-art recombinant, monoclonal, and immunologic technologies. Starting pay range is approximately \$20,000. Send résumé to: **Kenneth J. Hardy, M.D., Ph.D., Howard Hughes Medical Institute, Immunology Section M929, One Baylor Plaza, Houston, TX 77030.**

### POSTDOCTORAL POSITIONS

Available immediately to join a research project involving in vivo and in vitro experiments on the regulation and growth of limbs in mouse embryos. Ph.D. required, with experience in cell and tissue culture, molecular biology, and developmental biology desirable. Submit curriculum vitae, statement of research interests, and names of three individuals willing to write letters of recommendation to:

**Dr. Susan Bryant**  
Developmental Biology Center  
University of California, Irvine  
Irvine, CA 92717

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

**POSTDOCTORAL POSITION** available to study airway epithelial transport at the **University of Connecticut (UConn) Health Center School of Medicine, Pediatric Pulmonary Medicine.** Primary focus is on coordinating and supervising expanding division laboratory. Ph.D. in physiology; experience in electrophysiology and epithelial transport required. Please send résumé and three letters of reference to: **Barbara Nawrocki, MPH, Department of Pediatrics, UConn Health Center, L5090, 263 Farmington Avenue, Farmington, CT 06032.** *An Affirmative Action/Equal Opportunity Employer, M/W/H.*

**POSTDOCTORAL POSITION** available immediately for 4 years for research on the molecular biology of viruses and vascular cells. Previous experience in nucleic acids biochemistry and recombinant DNA technology is preferred. Salary: \$19,000 to \$21,000 per year. Please send curriculum vitae and three letters of reference to: **Dr. Maurice Nachtigal, Department of Pathology, University of South Carolina, School of Medicine, Columbia, SC 29208.** *An Affirmative Action/Equal Opportunity Employer.*

**TWO POSTDOCTORAL POSITIONS** available in spring of 1987, for research on EGF-receptor and other growth factor receptors. Candidates should be recent Ph.D.'s with experience in one or more of the following areas: cell biology, molecular biology, enzymology, or immunochemistry. Send curriculum vitae and letters of reference to: **Dr. M. Das, Department of Biochemistry and Biophysics, University of Pennsylvania School of Medicine, Philadelphia, PA 19104; telephone: 215-898-4433.**

**POSTDOCTORAL POSITION** available December 1986 to study the regulation of chemical synaptogenesis. Techniques used include intracellular recording, low-light video microscopy, and patch-clamp recording from developing synaptic terminals of cell-cultured identified molluscan neurons. Send curriculum vitae and letters of reference to: **Dr. P. G. Haydon, Department of Zoology, Iowa State University, Ames, IA 50011.**

**POSTDOCTORAL POSITION** in magnetic resonance imaging and in vivo NMR spectroscopy. Available immediately. Candidates must have experience in NMR. Research areas include: multinuclear imaging, cardiac spectroscopy and imaging, development of instrumentation, and signal processing. Send curriculum vitae and the names of three references to: **Joel F. Martin, Ph.D., Department of Radiology H-756, University of California at San Diego, 225 Dickinson Street, San Diego, CA 92103.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately to work on NIH-funded project studying functions of Epstein-Barr virus membrane proteins. Send curriculum vitae and three letters of reference to: **Lindsey Hutt-Fletcher, Box J-145, JHMH, University of Florida, Gainesville, FL 32610.**

### POSTDOCTORAL POSITION CONCERNING INSULIN ACTION

A postdoctoral position is available in the spring-summer of 1987, in the area of transmembrane and intracellular signaling by insulin. Specific projects will relate to insulin control of metabolism of a novel membrane glycopospholipid and to the characterization and role of this compound. Studies will involve use of cell culture, animal tissues, and human material. Applicants should have biochemical and cell biological backgrounds or interest and either an M.D., Ph.D., or M.D.-Ph.D. Stipends will be based on NIH guidelines. *The University of Pennsylvania is an Equal Opportunity Employer.* Interested applicants should send curriculum vitae and bibliography along with the names of three references to:

**Dr. Leonard Jarett**  
Department of Pathology and Laboratory Medicine  
University of Pennsylvania School of Medicine  
36th and Hamilton Walk/G3  
Philadelphia, PA 19104

**POSTDOCTORAL POSITIONS, Molecular Genetics**—Two positions are available to study: (i) the structural characterization of human alpha- and beta- spectrin genes, which will subsequently be used to identify the molecular defects in those inherited hemolytic anemias which have been shown to have deficient spectrin; (ii) the characterization of chloride transport proteins by cDNA and genomic cloning, mapping, and genetic linkage to cystic fibrosis and by using retroviral vectors to study the expression of cloned cDNA's. Experience in molecular biology is desirable. Inquiries with curriculum vitae and the names of three references should be sent to: **Dr. Peter Curtis, The Wistar Institute, 36th and Spruce Streets, Philadelphia, PA 19104. Equal Opportunity Employer, M/F.**

### St. John's University New York College of Pharmacy and Allied Health Professions POSTDOCTORAL POSITION IN PHARMACEUTICAL SCIENCES

Applications are invited for a postdoctoral fellowship position in the area of pharmaceutical sciences. The position is a 1-year fellowship requiring laboratory research.

Applicants should possess a Ph.D. in pharmaceutical sciences, pharmaceutical chemistry, medicinal chemistry, or a related field. Primary responsibilities include conducting a laboratory study of enzymes involved in pyrethrin biosynthesis. Experience in protein isolation and enzyme kinetics is desirable. Applicants should provide an updated curriculum vitae, including experience, and a list of three references and send to: **Dr. S. William Zito, Department of Pharmaceutical Sciences, College of Pharmacy and Allied Health Professions, St. John's University, Jamaica, NY 11439.**

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### POSTDOCTORAL POSITION—PLANT CHEMISTRY/ECOLOGY

Three-year position available March 1987, to study the role of plant secondary chemistry in goldenrod resistance to herbivorous gallmaking insects in collaboration with evolutionary and physiological ecologists, and population geneticist. Research projects include a correlative study of secondary metabolites with plant resistance, isolation and identification of secondary compounds with potential resistance properties, and involvement in the development of bioassays for antioviposition agents or larval toxins. Experience with diterpenoid and phenol chemistry, extraction techniques, GC mass spectrometry, and HPLC is highly desirable. Send curriculum vitae and three letters of recommendation by 15 January 1987 to: **Dr. Warren Abrahamson, Department of Biology, Bucknell University, Lewisburg, PA 17837. An Affirmative Action/Equal Opportunity Employer.**

## POSITIONS OPEN

### MEMBRANE-CYTOSKELETON IN DEVELOPMENT

**POSTDOCTORAL POSITION AVAILABLE** to study the assembly and organization of the plasma membrane cytoskeleton during differentiation of the mammalian erythrocyte. Of interest are the roles of the extracellular matrix and the contractile proteins actin, myosin, and tropomyosin. Send curriculum vitae and names of three references to: **Velia M. Fowler, Ph.D., Department of Anatomy and Cellular Biology, Harvard Medical School, 25 Shattuck Street, Boston, MA 02115.**

**POSTDOCTORAL RESEARCH ASSOCIATE, BIOCHEMISTRY**—A position is currently available for a recent or prospective Ph.D. with a background in biochemistry and/or parasitology. Research will involve the identification and characterization of enzymes associated with developmental stages of parasitic nematodes. Candidates should have experience in one of the following areas: enzymology, protein chemistry, and immunochimistry. Salary range \$26,381 to \$31,619, depending on experience. Applications, with curriculum vitae, should be sent before 1 January 1987 to: **Dr. H. R. Gamble, U.S. Department of Agriculture (USDA), Agricultural Research Service, Building 1040, Room 2, BARC-East, Beltsville, MD 20705.** Application must be marked 7E003. *USDA is an Equal Opportunity Employer. Women and minorities are urged to apply.*

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available in developmental neurobiology in well-established study of synapse formation in the auditory system. Research focuses on tissue and cellular interactions in the chick embryo, using state-of-the-art and classical neuroanatomical methods, transplantation, and cell culture. Interdisciplinary approach involving electrophysiological and biochemical collaborations with a congenial neuroscience faculty. Competitive salary, long-term support. Preference for strong background in electrophysiology. Please send résumé to: **D. K. Morest, Department of Anatomy, University of Connecticut Health Center, Farmington, CT 06032. An Affirmative Action/Equal Opportunity Employer, M/W/H.**

### POSTDOCTORAL RESEARCH ASSOCIATE IN CARDIAC CELL ELECTROPHYSIOLOGY:

Available immediately for 2 years, with a possible faculty appointment thereafter. Research involves whole cell patch and patch clamping techniques to study the conduction properties of calcium channels in diseased mammalian cardiomyocytes. Applicants must have prior experience with electrophysiological techniques using intracellular microelectrodes. Send cover letter, curriculum vitae, a summary of research interests, and three references to: **Dr. Kenneth L. Rossner, Department of Physiology, New York College of Osteopathic Medicine, Old Westbury, NY 11568.**



**Public Service Commission  
of Canada**

**Commission de la Fonction  
publique du Canada**

## Research Scientist

**Energy, Mines and Resources  
Geological Survey of Canada  
Ottawa, Ontario**

**We require** an experienced scientist to conduct research related to understanding fundamental problems of solid earth geophysics and lithospheric evolution. You will develop digital analysis techniques for the interpretation of large geophysical data sets in order to apply them on a regional, continental and global scale. You should be familiar with a broad range of digital filtering techniques in both the frequency and spatial domains and in such techniques as admittance function analysis, inverse theory and gradient analysis.

**You require** graduation with a doctorate degree from a recognized university in a field of earth science related to the position, or a lesser degree with evidence of research experience and productivity equivalent to that of a doctorate degree. It is imperative that you possess experience in conducting original research related to understanding fundamental problems in solid earth geophysics and lithospheric evolution and in writing and presenting research results to the scientific community. Knowledge of English is essential.

**We offer** a salary ranging from \$30,256 to \$56,277 commensurate with your qualifications and experience.

**Forward your résumé and/or application form, quoting reference number S-86-31-6802-47JG (G35), to:**

Joan Girling (613) 996-8054  
Public Service Commission of Canada  
Ottawa, Ontario K1A 0M7

**Closing date:** 2 January 1987

Personal information you provide is protected under the Privacy Act. It will be held in personal information bank CFP/PPU-040, personnel selection file.

**The Public Service of Canada is  
an equal opportunity employer**

**Canada**

## POSITIONS OPEN

**POSTDOCTORAL POSITIONS IN VISION** are available within the Vision Group at Northwestern University. Research foci include motion perception, binocular vision, vision and aging, or computational vision. Experience in computer programming and psychophysics desirable. Send curriculum vitae and three references to: **Drs. Robert Sekuler and Randolph Blake**, Department of Psychology, Cresap Neuroscience Laboratory, Northwestern University, Evanston, IL 60201. *An Equal Opportunity Employer.*

**TWO POSTDOCTORAL RESEARCH ASSOCIATE POSITIONS AVAILABLE.** (i) to study the molecular basis of the stage-specific invasive and adhesive behavior of human cytotrophoblast (placental) cells. (ii) to study expression of cell adhesion molecules in early mouse embryogenesis. Persons with strong background in immunology/biochemistry, molecular biology, or EM immunocytochemistry will be considered. Stipend \$18,000 to \$22,000. Apply to: **Dr. Caroline Damsky**, 681 Health Sciences West, University of California, San Francisco, CA 94143; telephone: 415-476-8922.

**POSTDOCTORAL RESEARCH ASSOCIATE POSITION** available for an individual interested in participating in a research project investigating fetal ethanol effects on neuroendocrine regulation of reproduction. Applicants must have a Ph.D. in an appropriate discipline; experience in RIA and HPLC is desirable. Applications including curriculum vitae and the names of three references should be sent by 1 January 1987 to: **Dr. P. Kevin Rudeen**, Department of Anatomy, University of Missouri-Columbia, School of Medicine, Columbia, MO 65212. *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL RESEARCH ASSOCIATE**—A 3-year position for a postdoctoral research associate is available immediately in the laboratory of **Dr. R. T. Sawyer** of the Division of Basic Medical Science of Mercer University School of Medicine (MUSM), Macon, GA. Candidates should have a Ph.D. or M.D. degree. The goals of the research include evaluation of changes in pulmonary alveolar macrophage subsets during inflammation in monocytopenic and genetically deficient inbred strains of mice. Salary \$20,000 per annum, plus \$10,000 per annum in direct support and modest relocation funds. Send curriculum vitae with names of three references to: **Dr. R. T. Sawyer**, Mercer University School of Medicine, Macon, GA 31207. *MUSM is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

### POSTDOCTORAL RESEARCH ASSOCIATE

Position is available immediately to examine the regulation and expression of transforming growth factors. Our approach utilizes various techniques including cDNA and genomic cloning, RNA expression analysis, in situ hybridization, in vitro mutagenesis, and transfection. Send résumé and three letters of recommendation to: **Dr. David C. Lee**, Lineberger Cancer Research Center, University of North Carolina, Chapel Hill, NC 27514. *An Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL RESEARCH ASSOCIATE CELLULAR ENDOCRINOLOGY

**AVAILABLE IMMEDIATELY.** To study control of hormone secretion at the single-cell level by use of reverse hemolytic plaque assays in combination with other modern biochemical and microscopic techniques. Ongoing projects include: (i) ontogeny and functional interconversion of growth hormone and prolactin secreting cells, (ii) differential regulation of hormone release from cells that simultaneously release both of these hormones, and (iii) molecular heterogeneity of secreted forms of hormone. Salary is very competitive and commensurate with experience. Background in cellular or molecular biology and endocrinology is desirable, but not an absolute requirement. Please send curriculum vitae and names of three references to:

**Dr. L. Stephen Frawley**  
Department of Anatomy and Cell Biology  
Medical University of South Carolina  
171 Ashley Avenue  
Charleston, SC 29425-2203  
Telephone: 803-792-3526

## POSITIONS OPEN

**POSTDOCTORAL POSITION—ELECTRON TRANSFER IN PEPTIDES:** Peptide synthesis for pulse radiolysis study of electron migration through proteins and polypeptides. Available now for 1 or 2 years. Peptide synthesis and/or kinetics background desirable. Applicants should send résumé and names of three references to: **Michael Klapper**, Department of Chemistry, Ohio State University, Columbus, OH 43210. *Ohio State is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL RESEARCH POSITION** available immediately for study of atrial natriuretic peptide secretion, actions, and metabolism in experimental hypertension and heart failure. Background in renal physiology/pharmacology and radioimmunoassay methodology desirable. Stipend is competitive. Send curriculum vitae and names of references to: **Dr. Ronald H. Freeman**, Department of Physiology, MA415 Medical Sciences Building, University of Missouri, Columbia, MO 65212. *The University of Missouri is an Equal Opportunity Employer.*

### PROTEIN CHEMIST

An opportunity is available for a biochemist with experience in protein structure studies. Candidate must have a doctoral degree in biochemistry and a minimum of 5 years of experience in the field of protein chemistry. Must be accomplished in the preparation of proteins and peptides by modern HPLC methods and the analysis of their composition and primary sequence. Must be experienced in the use of gas phase sequencer. Must be experienced in the use of computers to predict structure. Position is located in the Division of Medical Genetics, Department of Pediatrics, University of Southern California at Childrens Hospital of Los Angeles. Joint appointment in biochemistry is available. Excellent opportunities are available for collaboration and extension of interests to challenging cell biologic questions of protein translocation and membrane integration. Salary, academic rank, and tenure status are determined by experience and record of productivity. Send curriculum vitae, representative publications, statement of research interests, and names of three references to: **John A. Barranger**, M.D., Ph.D., Head, Division of Human Genetics, Childrens Hospital of Los Angeles, 4650 Sunset Boulevard, Los Angeles, CA 90027. *Childrens Hospital of Los Angeles and the University of Southern California are Affirmative Action Employers.*

### RESEARCH ASSOCIATE

Because of an expansion of our **Division of Gastroenterology**, an opportunity exists for a research associate to join **Winthrop-University Hospital**, a major teaching affiliate of Stony Brook, as director of gastrointestinal research. The successful candidate will have a Ph.D. in physiology or pharmacology, preferably with 2 years of postdoctoral research experience in studying motility of the gastrointestinal tract with in vitro and in vivo techniques. This is a hospital-based position with research funds provided. We offer a professional work environment, salary commensurate with experience, and a competitive benefit package. Interested candidates should submit curriculum vitae and names of two references to: **Robert Burakoff**, M.D., Chief, Gastroenterology Division, Winthrop-University Hospital, 259 First Street, Mineola, Long Island, NY 11501.

**BIOLOGICAL SCIENCES TEACHER:** The Department of Botany and the Biological Sciences Interdepartmental Program at North Carolina State University (NCSU) invite applications for a 9-month, tenure-track position at the assistant professor level. Duties involve lecturing to large classes and other assigned teaching duties in multi-section introductory biology courses for majors and/or non-majors. Requirements include a Ph.D. in the botanical sciences, a broad background in the biological sciences, and demonstrated effectiveness in communicating with large classes. The person selected must develop a productive research program in botany. Send curriculum vitae, statement of research goals, statement of teaching experience and potential to work in the described program, undergraduate and graduate transcripts, and three letters of recommendation before 1 February 1987 to: **Dr. Charles F. Lytle**, Coordinator, Biological Sciences Interdepartmental Program, Box 7611, NCSU, Raleigh, NC 27695-7611. *NCSU is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### RESEARCH ASSOCIATE

Position available after 1 January 1987 at **Duke University Medical Center, Durham, NC**, to study molecular biology of hormone-activated pathways and hormone-induced gene expression. Ph.D. or M.D. required, training in biochemistry or molecular biology would be appropriate. The position carries with it an appointment as associate of the Howard Hughes Medical Institute, with a competitive salary and benefits. Interested applicants should send curriculum vitae and names of three references to: **Dr. Perry J. Blackshear**, Duke University Medical Center, Box 3897, Durham, NC 27710.

**RESEARCH ASSOCIATE/POSTDOCTORAL POSITION** to investigate amino acid and calcium transport in isolated plasma membrane preparations from human placenta, emphasis on characterization of mechanisms, and cellular functions; requires Ph.D. degree and recent experience in biochemistry and/or cell biology, preferably in areas of plasma membrane function or transport. Send curriculum vitae and names of three references to: **Carl H. Smith, M.D.**, Professor of Pediatrics and Pathology, Washington University School of Medicine, P.O. Box 14871, St. Louis, MO 63178.

### VIROLOGIST/IMMUNOLOGIST

**Emory University** seeks candidates for a joint appointment as an assistant professor in the School of Medicine as a core staff scientist with faculty rank at the Yerkes Regional Primate Research Center. The successful candidate will be responsible for the development of an active research program in primate virology/immunology, with emphasis on retroviruses and other immunosuppressive viruses.

Candidates should send a letter of application, curriculum vitae, and three professional references to: **Dr. Frederick A. King**, Director, Yerkes Primate Center, and Chair, Search Committee for Virologist/Immunologist, Emory University, Atlanta, GA 30322.

Deadline for receipt of applications is 26 December 1986.

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## FELLOWS PROGRAM

### CALLIER RESEARCH FELLOWS PROGRAM CALLIER CENTER FOR COMMUNICATION DISORDERS SCHOOL OF HUMAN DEVELOPMENT THE UNIVERSITY OF TEXAS AT DALLAS

The Callier Research Fellows Program is a new program designed to provide scientists an opportunity to pursue their research goals in an active, multidisciplinary, laboratory/clinical setting. Callier Research Fellows are invited to contribute to either programs of basic research or to conduct applied research. At present, the center has the following specific research projects: the effects of aging in communication; vibrotactile and cochlear implant aids for the deaf; the neurophysiological basis of speech motor control in normal and impaired populations, specifically spasmodic dysphonia, stuttering, and apraxia; prospective study of early middle ear disease in language development; central processes in audition; animal and human evoked potentials and psychophysics; electrical stimulation of the auditory system; cochlear and vestibular anatomy; and effects of noise on hearing. For the first appointment, preference will be given to individuals with an interest in auditory neuroscience.

The appointments are for 1 year, with the option of extending for an additional year. The stipends will vary depending on qualifications, and a modest research budget is available. To apply for the program, please send curriculum vitae (*indication of sex and ethnicity for Affirmative Action statistical purposes is requested, but not required*), the names of three references, and a one-page description of research goals and interests to:

**Research Search number A6350**  
The University of Texas at Dallas  
P.O. Box 830688  
Richardson, Texas 75083-0688

*The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.*

## SCIENCE, ENGINEERING AND DIPLOMACY FELLOWSHIP

Applications Invited

The American Association for the Advancement of Science (AAAS), in cooperation with the Agency for International Development (AID) and the Department of State (STATE) is seeking applicants for two or more Science, Engineering and Diplomacy Fellowships. Fellows will spend 1 year, beginning 1 September 1987, working either in the Bureau of Oceans and International Environmental and Scientific Affairs of the Department of State or in one of several Bureaus of the Agency for International Development. Other assignments may also be possible.

Prospective fellows must demonstrate exceptional competence in some area of science or engineering, be flexible, have some experience and/or a strong interest in applying knowledge toward the solution of problems in the area of foreign affairs, and have a Ph.D. or equivalent in years of experience. Awardees will work on scientific and technical subjects in international affairs: foreign policy for STATE and international development for AID. In general, individuals are urged to apply from any area of physical, biological, behavioral, and social science and engineering and whose experience and training is applicable to any one of the following areas: food and agriculture; health and population; nuclear nonproliferation; scientific exchange; forestry, natural resources and ecology; oceans and fisheries; communications; national security; and human resources and education, among others.

The fellows will serve a 1-year appointment at a salary consistent with education level and experience, if possible, but not exceeding the GS-12 level (beginning at \$32,567). A security clearance process will be initiated after selection. The clearance must be obtained before a selectee can begin work in the State Department or AID and the fellowship award is contingent upon the selectee obtaining this clearance.

Deadline for receipt of application is 15 January 1987. For more information and application details, write:

Science, Engineering and Diplomacy Fellows Program  
American Association for the Advancement of Science  
1333 H Street, NW  
Washington, DC 20005

## SECTION HEAD SAFETY STUDIES

The Sterling-Winthrop Research Institute announces an opening for a Section Head, Safety Studies in its Toxicology Department.

The successful candidate will possess a PhD degree in a biological science or a D.V.M. degree with a demonstrated record of laboratory and administrative experience. This position requires broad comprehensive knowledge of toxicology and preclinical drug safety evaluation and familiarity with GLP regulations and worldwide drug regulatory requirements. Strong interpersonal skills, problem solving abilities and excellent oral/written communication skills are required.

We offer an attractive salary and benefits package with the opportunity for professional growth. Please send resume in confidence to:

William F. Sheldon  
Employment Manager



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## DEAN

### Graduate School of Oceanography and Director of Marine Programs

The University of Rhode Island is seeking applications and nominations for the position of Dean of the Graduate School of Oceanography and Director of Marine Programs. The incumbent is responsible for the administration of the Graduate School of Oceanography, the University's Narragansett Bay Campus, and the university-wide marine programs: Sea Grant, the Center for Ocean Management Studies, the Office of Marine Programs, and the International Center for Marine Resource Development. The Dean also advises the University administration on marine-related programs housed in other colleges such as Ocean Engineering, Marine Affairs, and Fisheries, Aquaculture.

Candidates for the position should have a distinguished record and have demonstrated professional and/or academic excellence in marine-related science including experience in development and support of funded research. Candidates should have an earned Doctorate.

The Graduate School of Oceanography has an academic and

research faculty of 40, a professional research staff of 20, a graduate student body of 165, and operates the ocean research vessel R/V ENDEAVOR. The School has a strong commitment to teaching, research and public service. As Dean and Director of Marine Programs, the incumbent is expected to provide imaginative leadership to strengthen the present programs and promote the national and international role of the institution.

Applications and nominations will be reviewed beginning January 15, 1987 and thereafter until the position is filled. Applications should include a letter of interest, curriculum vita, and a list of three to five references.

Send nominations and applications to: Robert P. Clagett, Chair, Graduate School of Oceanography Dean Search Committee, THE UNIVERSITY OF RHODE ISLAND, P.O. Box G, Kingston, Rhode Island 02881.

The University of Rhode Island is an affirmative action/equal opportunity employer m/f.

**URI**

**THE UNIVERSITY OF RHODE ISLAND**

## POSITIONS OPEN

### WAYNE STATE UNIVERSITY MOLECULAR BIOLOGY CENTER RESEARCH ASSOCIATE

The Molecular Biology Center of Wayne State University in Detroit, Michigan, is accepting applications for the position of research associate to work on a research project on human pepsinogens. Candidates should hold a Ph.D. and have experience in protein chemistry and recombinant DNA technology. Salary is commensurate with experience. Applicants should send a current curriculum vitae along with three letters of reference to: Dr. R. L. Lintvedt, Interim Director, Molecular Biology Center, 475 Chemistry Building, Wayne State University, Detroit, MI 48202.

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

**SURFACE SCIENTIST.** Faculty appointment anticipated in the Department of Chemistry at LEHIGH UNIVERSITY. Candidates engaging in surface electron spectroscopy are particularly encouraged to apply. Development of a vigorous sponsored graduate research program and teaching excellence at the undergraduate and graduate levels are requirements. Salary and rank are open. Please submit a current résumé and outline of proposed research to: Chairperson, Faculty Search Committee, Department of Chemistry, LEHIGH UNIVERSITY, Mudd Building, Number 6, Bethlehem, PA 18015. *Lehigh University is an Equal Opportunity/Affirmative Action Employer.*

University of Georgia/Environmental Protection Agency (UGA/EPA) VISITING SCIENTIST PROGRAM—The University of Georgia and EPA's Environmental Research Laboratory are seeking a visiting senior scientist to work collaboratively in Athens, Georgia, with the university and EPA for a 6-month period beginning 1 April 1987. Three possible areas of research are expert systems, anaerobic microbial transformations, and metal reactions in the environment. Salary (6 months) is \$28,000, plus health care benefits. Please submit, by 15 January 1987, a letter of interest indicating your research area of preference and curriculum vitae to: Patsy Songer, Office of the Vice President for Research, Graduate Studies Research Center, Room 610, University of Georgia, Athens, GA 30602.

## TRAINING PROGRAM

### THE JOINT DOCTORAL TRAINING PROGRAMS of the AMERICAN MUSEUM OF NATURAL HISTORY New York, NY 10024

The American Museum of Natural History has established a number of DOCTORAL TRAINING PROGRAMS in cosponsorship with selected universities. These programs are dedicated to the training of Ph.D. candidates in the scientific disciplines as represented in the museum, including invertebrate zoology, entomology, ichthyology, ornithology, mammalogy, paleozoology, anthropology, and mineral sciences.

**EVOLUTIONARY BIOLOGY PROGRAM and ANIMAL BEHAVIOR-BIOPSYCHOLOGY PROGRAM**  
City University of New York  
Biology or Psychology  
33 West 42 Street  
New York, NY 10036

**PALEONTOLOGY PROGRAM and MINERAL SCIENCES PROGRAM**  
Columbia University  
Department of Geological Sciences  
Lamont-Doherty Geological Observatory  
Palisades, NY 10964

**ANTHROPOLOGY PROGRAM and SYSTEMATIC ENTOMOLOGY PROGRAM**  
Graduate School  
Fields of Entomology or Anthropology  
Cornell University  
Ithaca, NY 14853

Application must be made through the appropriate university from which forms and further information can be obtained. Please state program that you wish to enter. There are a limited number of fellowships available for the 1987 to 1988 academic year.

*Equal Opportunity/Affirmative Action Institution*

## SUMMER PROGRAM

### 9TH SUMMER PROGRAM IN METHODS OF IMMUNOLOGIC RESEARCH AND DIAGNOSIS

7 to 20 June 1987

A 2-week program combination of core and elective lectures, demonstrations, discussions, practical laboratory exercises and techniques personally carried out at the bench. Open to postdoctoral level, supervisory senior technologists, and graduate students beyond the master's level. Contact: James F. Mohn, M.D., Director, The Ernest Witebsky Center for Immunology, 200 Sherman Hall, University of Buffalo, State University of New York, Buffalo, NY 14214; telephone: 716-831-2848, by 20 February 1987.

## GRADUATE TRAINING

### ASSISTANTSHIPS GRADUATE TRAINING PROGRAM IN NEUROSCIENCE

The Neuroscience Program at The Milton S. Hershey Medical Center of The Pennsylvania State University has assistantships available in September 1987. This interdepartmental program is designed to confer a Ph.D. degree with a major in neuroscience after 4 years of study. A master's degree program is also available. Participating faculty have established research programs in molecular biology of the nervous system, neurophysiology, neuroendocrinology, behavioral science, neuropharmacology, and cerebral blood flow and metabolism. Interested candidates are invited to apply to: Dr. Robert Page, Chairman, Neuroscience Program, The Milton S. Hershey Medical Center, The Pennsylvania State University, P.O. Box 850, Hershey, PA 17033. *An Equal Opportunity/Affirmative Action Employer.*

## FELLOWSHIPS

**TWO PREDOCTORAL FELLOWSHIPS** are available. Both are 12-month positions with expected durations of 4 years. The first is a pure research appointment for the study of retinal neurophysiology using intracellular recording techniques. The second is open regarding research area and involves some teaching responsibilities (approximately 10 hours per quarter, fall and winter only). Applicants must have at least a B.S./B.A. degree with outstanding academic record. Program will lead to Ph.D. Tax-free stipend is \$10,000, plus fee waiver. Send curriculum vitae, letter indicating research background and interests, transcripts, GRE scores and three letters of recommendation by 1 January 1986 to: Dr. Gary A. Dudley, Department of Zoological and Biomedical Sciences, Ohio University, Athens, OH 45701.

**POSTDOCTORAL FELLOWSHIP AVAILABLE, CELLULAR IMMUNOLOGY**, January 1987, in the laboratory of Dr. Malcolm S. Mitchell, Kenneth Norris Jr. Cancer Hospital and Research Institute, University of Southern California Cancer Center, Los Angeles, CA. Opportunity available in human tumor immunology for an individual with background in cell-mediated immunity in animals or humans interested in mechanisms and targets of lymphocyte-mediated cytotoxicity. Would be involved in scientific investigations associated with NIH and privately funded studies of active specific immunotherapy and interleukin-2 treatment in melanoma. Please send inquiries, curriculum vitae, and names of two to three references to: Malcolm S. Mitchell, M.D., University of Southern California Cancer Center, 2025 Zonal Avenue, Los Angeles, CA 90033.

The University of Colorado Alcohol Research Center has available POSTDOCTORAL RESEARCH FELLOWSHIPS for work in areas of alcohol and drug abuse. Research preceptors in areas ranging from molecular mechanisms of alcohol and drugs of abuse to clinical investigations are available. Emphasis is placed on animal and human genetics in many laboratories. To apply, please send a current curriculum vitae and a letter describing your interests to: Richard A. Deitrich, Ph.D., Director, Alcohol Research Center, University of Colorado School of Medicine, Department of Pharmacology (C236), 4200 East 9 Avenue, Denver, CO 80262, and also request letters from three references to be sent.

*The University of Colorado Alcohol Research Center is an Equal Opportunity/Affirmative Action Employer.*

## FELLOWSHIPS

**RESEARCH FELLOWSHIPS IN OTOLARYNGOLOGY AND RELATED BASIC SCIENCE SPECIALTIES** are available beginning 1 July 1987 for individuals preparing for academic careers. A 1-year fellowship is available for an otolaryngologist with prior research experience. A 2-year fellowship is available for a basic scientist with a Ph.D. degree in a related field. Apply to: Robert H. Mathog, M.D., Chairman of Otolaryngology, Wayne State University, 540 East Canfield, Detroit, MI 48201.

**POSTDOCTORAL FELLOWSHIP** available for research in steroid receptors. Three years of training in purification and characterization of steroid receptors, photoaffinity labeling of steroid receptors, HPLC chromatofocusing, and column chromatography required. Forty hours per week. Salary \$17,400 per annum. Please mail résumé and copy of ad to:

Department of Employment and Training  
1123 North Eutaw Street  
Room 201 B  
Baltimore, MD 21201  
Job Order number 6014565  
Job location: Baltimore

**HARVARD UNIVERSITY** announces **BULLARD FELLOWSHIPS IN FOREST RESOURCES** with stipends available for advanced study and research. Fellowships are open to individuals in academic careers, public service, or private forestry with stipends up to \$15,000. Further information may be obtained from the: Committee on the Charles Bullard Fund for Forest Research, Harvard University, Harvard Forest, Petersham, MA 01366.

Deadline for applications: 1 February 1987.

The Division of Geological and Planetary Sciences at the California Institute of Technology expects to offer **POSTDOCTORAL RESEARCH FELLOWSHIPS** in one or more of the following areas: geology, geophysics, geochemistry, and planetary sciences. Interested persons are asked to send their résumés to: The Division Chairman, Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, CA 91125. *An Equal Opportunity/Affirmative Action Employer.*

**RESEARCH FELLOWSHIPS IN GERONTOLOGY**—Postdoctoral and predoctoral research fellowships, supported in part by training grants from the National Institute on Aging, are available at The University of Michigan Institute of Gerontology. Stipends, tuition, fees, and travel support will be provided to qualified applicants. Prospective faculty mentors represent the behavioral, biological, clinical, and social sciences and the humanities, as follows: W. A. ACHENBAUM, Ph.D.; R. C. ADELMAN, Ph.D.; DAVID AMINOFF, Ph.D., D. Sc.; B. J. COHEN, D.V.M., Ph.D.; J. A. FAULKNER, Ph.D.; B. E. FRIES, Ph.D.; A. GAFNI, Ph.D.; J. B. HALTER, M.D.; A. R. HERZOG, Ph.D.; T. HICKEY, Dr.P.H.; J. S. HOUSE, Ph.D.; N. KRAUSE, Ph.D.; J. KUWADA, Ph.D.; J. LIANG, Ph.D.; M.A. PERLMUTTER, Ph.D.; L. M. VERBRUGGE, Ph.D.; B. VILLEPONTEAU, Ph.D.; T. J. WELLS, R.N., Ph.D.; T. P. WHITE, Ph.D. Candidates should forward a letter of interest, complete curriculum vitae, bibliography, and identification of potential faculty mentor to: Jane Ketchin, Institute of Gerontology, The University of Michigan, 300 North Ingalls, Ann Arbor, MI 48109-2007. Candidates should also arrange for delivery of official copies of graduate transcripts and at least three letters of recommendation. *The University is an Equal Opportunity/Affirmative Action Employer.*

### BIOLOGICAL PREDOCTORAL FELLOWSHIPS AT GEORGETOWN UNIVERSITY (1987)

The Department of Biology offers a broad education in biology with specializations in behavior, biochemistry, cell biology, development, ecology, entomology, immunology, invertebrate physiology, microbiology, genetics, neurobiology, phycology, protozoology, and ultrastructure. Please direct inquiries and applications by 1 February 1987 to: Professor E. M. Barrows, Room 405, Department of Biology, Georgetown University, Washington, DC 20057.

# Scientific Research

# Summer Faculty and Graduate Student Research Program



The USAF Summer Faculty Research Program (SFRP) and Graduate Student Research Program sponsored by the Air Force Office of Scientific Research and conducted by Universal Energy Systems, Inc. (UES) provides research opportunities for qualified faculty members and graduate students of U.S. Institutions of higher education.

- Electrical Engineering
- Mechanical Engineering
- Aeronautical and Astronautical Engineering

- Biomedical Engineering
- Chemical, Industrial and Civil Engineering
- Physics
- Computer Modeling and Computer Science
- Chemistry
- Mathematics
- Behavioral Science
- Operations Research
- Metallurgy
- Logistics, Production, and Systems Management
- Meteorology and Geophysics
- Life Sciences, Biology and Biophysics

To be eligible for participation, individuals must be U.S. citizens currently serving as full-time faculty or graduate students at U.S. Institutions. All qualified applicants will receive consideration without regard to age, color, race, religion, sex, or national origin.

Interested individuals are requested to contact:

**SFRP Administrator**  
**Universal Energy Systems, Inc.**  
4401 Dayton-Xenia Road  
Dayton, Ohio 45432  
Phone (800) 533-7532



## Universal Energy Systems

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# Graduate Fellowship

# Laboratory Graduate Fellowship Program



The USAF Laboratory Graduate Fellowship Program sponsored by the Air Force Office of Scientific Research and conducted by Universal Energy Systems, Inc. (UES) provides 3 year fellowships for qualified graduate students of U.S. Institutions of higher education.

- Electrical Engineering
- Mechanical Engineering
- Aeronautical and Astronautical Engineering
- Biomedical Engineering
- Chemical, Industrial and Civil Engineering
- Physics
- Computer Modeling and Computer Science
- Chemistry
- Mathematics
- Behavioral Science
- Metallurgy
- Meteorology and Geophysics
- Life Sciences, Biology and Biophysics

To be eligible for participation, individuals must be U.S. citizens, and receive their baccalaureate by 1987. All qualified applicants will receive consideration without regard to age, color, race, religion, sex, or national origin.

Interested individuals are requested to contact:

**LGFP Administrator**  
**Universal Energy Systems, Inc.**  
4401 Dayton-Xenia Road  
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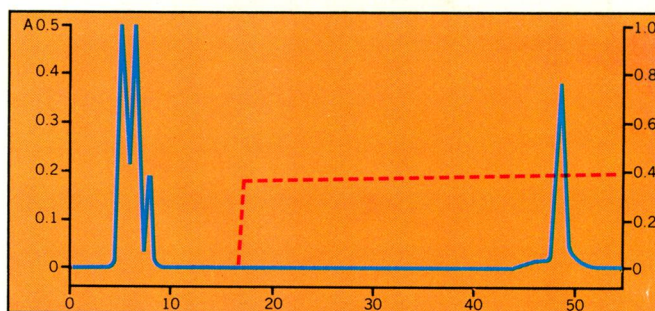
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