

FIDIA RESEARCH FOUNDATION SYMPOSIUM

# NEUROSTEROIDS AND BRAIN FUNCTION

November 8-9, 1991 • New Orleans, Louisiana

Satellite of the 21st Annual Meeting of the Society for Neuroscience

## November 8, 1991

### Introductory Remarks

*Erminio Costa (Washington, DC)*

### Plenary Lecture: Transcriptional Regulation of Gene Expression

*Bert W. O'Malley (Houston, TX)*

### Session I

#### Steroid Receptors and Brain Function

*Stanley J. Watson (Ann Arbor, MI)*

*E. Ronald de Kloet (Utrecht, The Netherlands)*

*John W. Funder (Melbourne, Australia)*

*Bruce S. McEwen (New York, NY)*

### Session II

#### Steroid Regulation and Brain Function

*Bruce S. McEwen (New York, NY)*

*Mary Dallman (San Francisco, CA)*

*Huda Akil (Ann Arbor, MI)*

*Jacques Drouin (Montréal, Canada)*

*Italo Mocchetti (Washington, DC)*

*Robert Sapolsky (Stanford, CA)*

*Edward D. Hall (Kalamazoo, MI)*

### Plenary Lecture: Neurosteroids

*Étienne-Émile Baulieu (Bicêtre, France)*

## November 9, 1991

### Session III

#### Neurosteroids

*Steven M. Paul (Bethesda, MD)*

*Richard W. Olsen (Los Angeles, CA)*

*Jeremy J. Lambert (Dundee, Scotland)*

*Sheryl S. Smith (Philadelphia, PA)*

*Robert Purdy (San Antonio, TX)*

*Kelvin W. Gee (Los Angeles, CA)*

*Maria Dorota Majewska (Baltimore, MD)*

*Stefano Vicini (Washington, DC)*

*Miles Orchinik (Corvallis, OR)*

### Session IV

#### Recent Studies on the Regulation of Steroid Synthesis in Brain and Periphery

*Alessandro Guidotti (Washington, DC)*

*Harry J. Karavolas (Madison, WI)*

*Paul Robel (Bicêtre, France)*

*Karl E. Krueger (Washington, DC)*

*Peter F. Hall (Randwick, Australia)*

*Vassilios Papadopoulos (Washington, DC)*

*Erminio Costa (Washington, DC)*

### Closing Remarks

*Steven M. Paul (Bethesda, MD)*

## General Information

### Site

Doubletree Hotel, 300 Canal Street, New Orleans, Louisiana. 1-800-528-0444

### Registration Fee

US\$200.00; \$US100.00 for students and postdoctoral fellows; no charge for press. Registered participants are entitled to the printed materials of the symposium, coffee breaks, and working lunches on the two days of the meeting.

**Registration deadline:** October 15, 1991

### Accommodations

A number of rooms have been reserved for participants at the Doubletree Hotel.

### CME

The Georgetown University School of Medicine Office of Continuing Medical Education designates this program for 12 credit hours in category 1 of the Physician's Recognition Award of the American Medical Association.

For further information, please contact:

Fidia Research Foundation, 1640 Wisconsin Avenue, NW, Suite 2, Washington, DC 20007, Tel. 202-337-7185, Fax. 202-337-7188.

The National Institutes of Health  
Presents a Conference on

## Human Gene Therapy

Under the sponsorship of the National Heart, Lung, and Blood Institute (NHLBI) and the National Institutes of Health (NIH), Office of the Director

December 4-6, 1991

Masur Auditorium

National Institutes of Health

Bethesda, Maryland

This conference will consist of two parts. Part One on "Human Gene Therapy" is supported by the NHLBI as part of the Institute's "Frontiers in Basic Sciences" series of conferences, and Part Two on "Basic Science Issues Related to Human Gene Therapy" is sponsored by the Recombinant DNA Advisory Committee of the NIH Office of the Director. The conference will be cochaired by Dr. French Anderson, Chief, Molecular Hematology Branch, NHLBI, and Dr. William Kelley, Dean, University of Pennsylvania Medical School. Presentations will be structured around the following topics: Part One--ADA Deficiency, Cancer, Cardiovascular Diseases, Blood Diseases, Pulmonary Diseases and AIDS, and Liver Diseases; Part Two--Vectors as Delivery Systems, Experimental Models and Specific Issues, and Ethical and Policy Issues.

The speakers are French Anderson, Arthur Bank, Michael Blaese, Claudio Bordignon, Malcolm Brenner, Bryan Brewer, Sam Broder, Mario Capecchi, Alexander Capron, Barrie Carter, Alexander Clowes, Francis Collins, Ronald Crystal, Albert Deisseroth, David Dichek, Stephen Epstein, Suzanne Epstein, Theodore Friedmann, Philip Frost, Eli Gilboa, William Kelley, Edward Korn, Fred Ledley, Myron Levine, David Martin, Malcolm Martin, Gerald McGarrity, Dusty Miller, Richard Morgan, Richard Mulligan, Elizabeth Nabel, Gary Nabel, Arthur Neinhuis, Richard O'Reilly, Steve Rosenberg, Richard Samulski, Dinka Valerio, Sir David Weatherall, Alison Wichman, James Wilson, Nelson Wivel, Jon Wolff, and Savio Woo.

For further information and registration materials, please contact: Ms. Geraldine Wolfle, Office of Program Planning and Evaluation, National Heart, Lung, and Blood Institute, National Institutes of Health, Building 31, Room 5A06, Bethesda, Maryland 20892, (301) 496-9899.

## APPLICATIONS FOR SCIENTIFIC VISITS TO THE USSR & EASTERN EUROPE

The NAS invites applications from American scientists who wish to visit the USSR, Bulgaria, Czechoslovakia, Hungary, Poland, Romania, and Yugoslavia. Applicants must be U.S. citizens and must possess doctoral degrees or their equivalent six months prior to the requested beginning date of their visits in physics; chemistry; mathematics and computer sciences; earth, atmospheric, and oceanographic sciences; agricultural, forestry, fishery, and plant sciences; biological sciences; environmental sciences; engineering; archeology and anthropology; geography; psychology; science and technology policy; and the history and philosophy of science. Projects in the economic and social sciences that involve development of new analytical methodologies will be considered on a case-by-case basis. The program has a special emphasis for young investigators.

Applicants for the project development visits need to demonstrate that joint proposals for collaborative research will be prepared during their visits for submission to the National Science Foundation for funding.

### Project Development Visits in 1992

The program of two-week project development visits will support two rounds of visits: April through August 1992 and August through December 1992. **Applications for this program must be postmarked no later than November 30, 1991, for the first round and February 29, 1992 for the second round.**

### New Approach in 1993

American scientists interested in visiting the USSR or Eastern Europe in 1993 may apply to the NAS for travel grants to help defray the costs of the visits. Also, American scientists interested in receiving scientific colleagues from the USSR or Eastern Europe may apply for travel grants to help support the visitors. Applicants are expected to make all logistical and administrative arrangements for the visits since NAS will no longer organize exchange programs through counterpart academies of sciences.

**Application deadlines for these programs are February 29, 1992, for long-term research (one to six months) visits in 1993; September 30, 1992 for project development visits to take place between January and June 1993; and February 28, 1993 for project development visits to take place between July and December 1993.**

Address application requests to:

Soviet and East European Affairs  
National Academy of Sciences  
2101 Constitution Avenue, NW (FO 2014)  
Washington, DC 20418  
Telephone: (202) 334-3680

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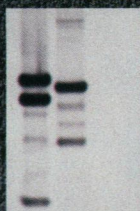
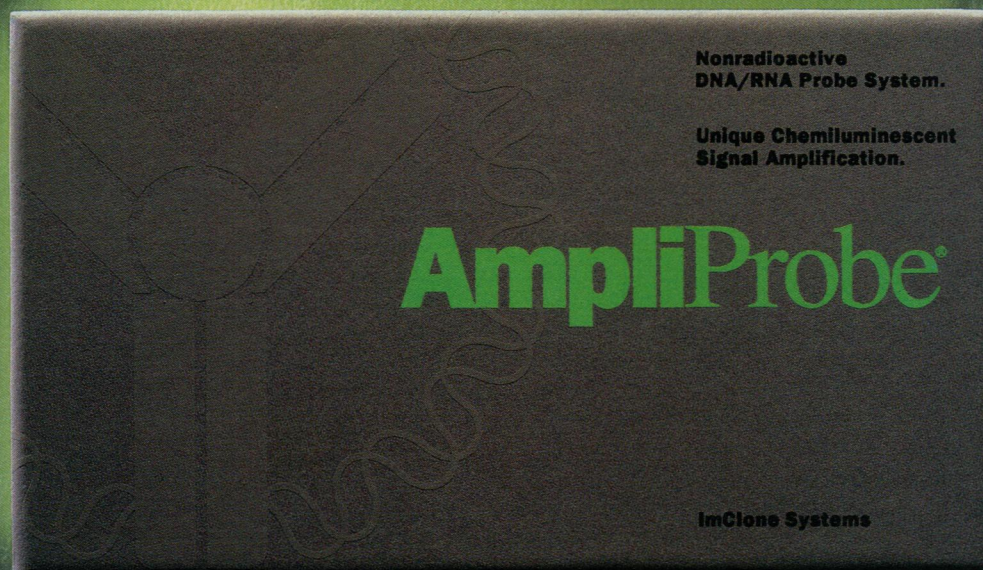


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sonic applications, including disruption of bacterial cells, viruses, and spores; emulsification and dispersion of solids in liquid; acceleration of enzymatic and chemical reactions; and degassing of liquids. The Virsonic 50 is designed for narrow diameter vessels such as microcentrifuge tubes, vials, and test tubes and sample volumes ranging from 0.2 to 40 ml. Energy output is adjustable. VirTis Co. Circle 560.

### Monoclonal Antibodies

A monoclonal antibody (MAb) to hematopoietic precursor cells and endothelial cells is available directly conjugated to FITC. It is suitable for use both in immunocytochemical techniques and flow cytometry. Serotec. Circle 561.

Diversi-T $\beta$ V8(b)<sup>bc</sup> and Diversi-T $\delta$ V1(a) are the latest additions to a line of MAbs to the human T cell antigen receptor. The antibodies can be used in flow cytometry, immunohistology, protein immunoblots, and enzyme-linked immunosorbent assays. T Cell Diagnostics. Circle 562.

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.

A MAb to cytokeratin 20 is suitable for use in frozen sections, formalin-fixed paraffin-wax embedded tissues, cytological material, and protein immunoblotting. Cymbus Bioscience. Circle 563.

### Fluorescent Rulers

These fluorescent rulers are visible on any standard ultraviolet transilluminator and can be adjusted for brightness to match the intensity of gel bands. The rulers can help eliminate problems with double exposures, duplicate photographs, and calculating  $R_f$  values. They measure 7 mm in width and either 100 or 200 mm in length, occupy little space in the photograph, and are reusable. Integrated Separation Systems. Circle 564.

### Purification-Free Matrix for DNA Electrophoresis

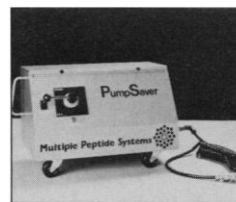
AgarTex Plus is a synthetic gel matrix for the separation of polymerase chain reaction fragments. AgarTex Plus is intended as an agarose replacement for electrophoretic separations of double-stranded DNA fragments from 8 to 20,000 base pairs. The matrix provides immediately usable samples by simply excising and melting the relevant gel section, eliminating any further purification procedures. National Diagnostics. Circle 565.

### Glass Slurry Purification of DNA

The GlassMAX DNA Isolation Spin Cartridge System uses a microcentrifuge spin cartridge and filter for the rapid purification of DNA from agarose gels. In only three steps (binding, washing, and eluting), high-quality DNA can be purified in as little as 5 minutes. Each cartridge can purify 25 ng to 50  $\mu$ g of DNA. There is no need to perform phenol or chloroform extractions, and the recovered DNA is suitable as substrate for cloning, amplification, and sequencing. GIBCO BRL. Circle 566.

### Vacuum Pump Oil Changer

The PumpSaver can change vacuum pump oil in less than 4 minutes without the user coming in contact with the new or used oil or turning off the vacuum-attached appliance. A snap-lock, leakproof fitting between the pump and the vacuum-attached



appliance allows the vacuum to be retained in the appliance while the pump oil is changed. The PumpSaver is a self-contained device with 2.5-gallon disposable reservoirs and a 6-foot flexible drainage tube for reaching inaccessible pumps. Multiple Peptide Systems. Circle 567.

### Graphing Software

RPlot Version 2.00 is an upgrade of a software program for direct plotting of scientific and engineering results. In addition to being a tool for quick visualization of data, the program can produce publication-quality figures. A new curve-fitting capability includes options for cubic spline interpolation and nonlinear least-squares fitting using a unique rational function model. RPlot will run on an IBM PC, XT, AT, PS/2, or compatible computer with 256K random access memory; a CGA, EGA, VGA, or Hercules video adapter; and MS-DOS version 3.0 or higher. An ASCII text editor must be used in conjunction with the program and a math coprocessor is recommended. RSoft Inc. Circle 568.

### Literature

*HPLC Systems* is a new brochure on four systems. Gilson Medical Electronics. Circle 569.

*Cell Separation Media for Centrifugation, Isolation, and Biological Separations* is a wall chart with information and references on routine and research cell separation applications. Accurate Chemical and Scientific Corp. Circle 570.

*1991 Vector Laboratories Catalog* introduces more than 75 new products, including a tissue adhesive, a neuronal tracing reagent, enzyme substrate kits, novel biotinylating agents, agarose protein A, lectins and lectin conjugates, and labeled and unlabeled secondary antibodies. Vector Laboratories. Circle 571.

*LC Views* is a free newsletter that provides liquid chromatography users with information on technological and industry trends, advances, data handling and management, and new applications. Perkin-Elmer. Circle 572.

*S&S 1991 Product Update* is a minicatalog including Affinity Chromatography products, the Elu-Quik DNA Purification Kit, disposable filtration devices, and electrophoresis equipment. Schleicher & Schuell. Circle 573.



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## POSITIONS OPEN

### ASSISTANT PROFESSOR

The Department of Anatomy has a tenure-track position available for appointment beginning 1 July 1992. Applications are invited from individuals with at least 2 years of postdoctoral training. Preference will be given to those whose research focuses on cellular/molecular aspects of developmental biology or neurobiology, although consideration will not be limited to these areas. The successful candidate will be expected to teach medical students (gross anatomy) and graduate students and to establish an independent research program. Candidates should submit curriculum vitae, a summary of past and proposed research interests, and names of at least three references by 1 November 1991 to:

Shirley Ann Gilmore, Ph.D.  
Professor and Chairman  
Department of Anatomy (#510)  
University of Arkansas for Medical Sciences  
4301 West Markham  
Little Rock, AR 72205-7199

*The University of Arkansas for Medical Sciences is an Equal Opportunity/Affirmative Action Employer.*

The Faculty of Sciences of the University of Geneva (Switzerland) invites applications for the position of full

### ASSISTANT PROFESSOR

(professor adjoint)

### OF NATURAL SCIENCES OF THE ENVIRONMENT

Main responsibilities for this position will include the organization and coordination of a new M.Sc. course in natural environmental sciences, interdisciplinary teaching and research in the field of environmental sciences.

The candidate must hold a Ph.D. or equivalent academic title. Qualifications in teaching, interdisciplinary research and an experience in organization and public relations are required. Position starts on 1 March 1992.

Applications should be sent by 15 November 1991 to: *Secrétariat de la Faculté des Sciences*, 30, quai Ernest-Ansermet, CH-1211 Genève 4, Switzerland, where further information can also be obtained.

### FACULTY POSITIONS IN CELL BIOLOGY AND GENETICS UNIVERSITY OF UTAH

The biology department at the University of Utah seeks applications for two tenure-track positions, one in the area of cell biology and one in genetics. While the positions are nominally at the ASSISTANT PROFESSOR level, more senior applicants will also be considered. Interested individuals should submit curriculum vitae, three letters of reference, and a statement of research interests to the appropriate search committee. Review of applications will begin on 15 October 1991, and continue until the positions are filled.

Dr. Baldomero Olivera  
Cell Biology Search Committee  
or

Dr. John S. Parkinson  
Genetics Search Committee  
Biology Department  
University of Utah  
Salt Lake City, UT 84112

*The University of Utah is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

**VISITING ASSISTANT PROFESSOR** in biochemistry or bio-organic chemistry, with a contract running from February or September 1992 through May 1993. The position may eventually be converted to tenure track. ACS-approved department in an undergraduate university of 1700 students. Ph.D. in biochemistry or organic chemistry required. The successful candidate will be expected to teach biochemistry, and share in the teaching of organic chemistry, nonmajors courses, laboratory sections and supervise undergraduate research. Send application, curriculum vitae, including undergraduate and graduate transcripts, and have three letters of recommendation sent to: Dr. Timothy R. Rettich, Head, Department of Chemistry, Illinois Wesleyan University (IWU), Bloomington, IL 61702. Applications considered beginning 3 weeks after first publication of this ad. *IWU is an Equal Opportunity Employer and applications from women and minorities are strongly encouraged.*

## POSITIONS OPEN

### ASSISTANT PROFESSOR IN PLANT MOLECULAR BIOLOGY AT UNIVERSITY OF ILLINOIS AT CHICAGO

Applications are invited for a tenure-track position available beginning fall of 1992 at the assistant professor level in the Department of Biological Sciences at the University of Illinois at Chicago. Candidates with postdoctoral experience and expertise in either higher or lower plants will be considered. The successful applicant will be expected to develop a strong research program in plant molecular biology and to participate in the departmental coursework offerings. Please send curriculum vitae, a statement of research goals and the names and addresses of three referees to:

Plant Molecular Biology Search Committee  
c/o Dr. Sidney B. Simpson, Jr., Head  
Department of Biological Sciences (M/C 066)  
The University of Illinois at Chicago  
Box 4348  
Chicago, IL 60680

Applications will be accepted until 21 October 1991.

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### ACADEMIC POSITIONS

**ASSISTANT PROFESSORSHIPS.** The Department of Chemistry and Biochemistry of The University of Texas at Austin solicits applications for tenure-track assistant professorships anticipated to be available September 1992. Exceptional candidates in all areas of chemistry/biochemistry will be considered. Candidates who have demonstrated outstanding research ability and show promise in teaching should forward curriculum vitae, short descriptions of research plans, and three letters of reference by 1 November 1991 to: Search Committee, Department of Chemistry and Biochemistry, The University of Texas at Austin, Austin, TX 78712. *Equal Opportunity/Affirmative Action Employer.*

### WATERSHED MANAGEMENT RESEARCH ASSISTANT PROFESSOR

Candidates sought with demonstrated expertise in formulation, verification, application of ecosystem models and geographic information systems to natural resource issues. Earned doctorate with emphasis on interdisciplinary training relevant to issues in watershed management (forestry, ecology, geology, hydrology, or quantitative sciences). Three-year, nontenured-track position. Send letter of application, transcripts, résumé, a statement of how modeling-gis can address land-water interactions and three references to: Dr. Robert J. Naiman, Director of Center for Streamside Studies, College of Forest Resources, AR-10, University of Washington, Seattle, WA 98195. Closing date: 29 October 1991.

### ASSISTANT PROFESSOR OF PLANT PATHOLOGY

Applications are invited for a 12-month, tenure-track position in the area of prokaryotic plant pathogens at the University of Kentucky. A Ph.D. in plant pathology or a related discipline and research experience concerning molecular approaches to the study of a prokaryote-host plant system are required. Postdoctoral experience is desirable. Applicants should ensure that curriculum vitae, transcripts, sample publications, any other evidence of professional accomplishments considered relevant, and three professional letters of reference reach: Dr. David A. Smith, Plant Pathology Department, S-305 Agricultural Science Building-North, University of Kentucky, Lexington, KY 40546-0091 (telephone: 606-257-3901; FAX: 606-258-1961) by 30 November 1991. *The University of Kentucky is an Equal Opportunity Employer.*

**ASSISTANT/ASSOCIATE PROFESSOR,** The Institute for Toxicology, School of Pharmacy, University of Southern California. Applicants who have ongoing research interests in free-radical biology or chemistry as well as a strong commitment to teaching in the biomedical sciences are sought for a tenure-track position available immediately. Complete curriculum vitae and the names of three reference should be submitted by 15 November 1991 to: Dr. Paul Hochstein, Institute for Toxicology, 1985 Zonal Avenue, Los Angeles, CA 90033. *The University of Southern California is an Equal Opportunity/Affirmative Action Employer.*



## POSITIONS OPEN

**ASSISTANT PROFESSOR: PLANT SYSTEMATICS/EVOLUTION.** The Botany Department, University of Georgia, invites applications for this 9-month, tenure-track position, beginning 1 September 1992. Candidates should possess demonstrated research capabilities in molecular systematics or methods and principles in phylogeny reconstruction. The successful candidate is expected to maintain an active research program with strong participation in undergraduate and graduate training and teaching in plant systematics and related courses in his/her specialty. Send curriculum vitae, reprints, statements of research and teaching interests, and four letters of reference directly to: **Dr. David E. Giannasi, Department of Botany, University of Georgia, Athens, GA 30602.** Closing date is 15 December 1991. *An Equal Opportunity/Affirmative Action Institution.*

## MOLECULAR GENETICS/ SIGNAL TRANSDUCTION

### MOLECULAR DEVELOPMENTAL BIOLOGY UNIVERSITY OF ILLINOIS AT CHICAGO (UIC)

The Laboratory for Molecular Biology of the Department of Biological Sciences invites applications for two tenure-track faculty positions at the **ASSISTANT PROFESSOR** level available in fall 1992. The Laboratory wishes to complement its strong molecular genetics research group by expanding its interest in signal transduction and developmental biology.

Outstanding candidates with promising research programs utilizing molecular and/or genetic approaches to study (1) regulatory mechanisms involving signal transduction pathways or (2) eukaryotic developmental systems are encouraged to apply.

Successful candidates are expected to have a Ph.D. or M.D. degree with postdoctoral experience, and to provide evidence that they can pursue a vigorous, independent research program, and must be willing to contribute to the department's coursework offerings. Please apply by sending curriculum vitae, description of research interests, and names and addresses of three references to:

#### LMB Search Committees

c/o Dr. Emanuel Margoliash, Coordinator of LMB  
Department of Biological Sciences (M/C 066)  
University of Illinois at Chicago  
P.O. Box 4348  
Chicago, IL 60680

Attention: Therese Roschay, telephone: 312-996-2213. Applicants must specify to which position they are applying. Application deadline is 15 November 1991. *UIC is an Affirmative Action/Equal Opportunity Employer.*

### ASSISTANT PROFESSOR DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY DARTMOUTH MEDICAL SCHOOL

Applications are invited from qualified individuals possessing a Ph.D. or M.D. degree and relevant postdoctoral experience. Preference will be given to applicants in molecular pharmacology in such areas as gene therapy, cancer chemotherapy or neuropharmacology, although other areas will also be considered. The successful applicant will be expected to develop an active, externally funded research program. Responsibilities will include medical and graduate teaching in pharmacology and/or toxicology. Applicants should forward complete curriculum vitae including any teaching experience and grant support, an outline of future research plans, and three letters of reference to: **Chair, Department of Pharmacology and Toxicology, Dartmouth Medical School, Hanover, NH 03756.** Applications will be reviewed beginning 15 October 1991 and will continue until the position has been filled. *Women and minorities are urged to apply. Dartmouth College is an Equal Opportunity/Affirmative Action Employer.*

University of Maryland at Baltimore, Division of Endocrinology, seeks Ph.D. at the **ASSISTANT PROFESSOR** level to supervise all aspects of Adult Endocrinology Laboratory. Prior experience with radioimmunoassays required. Administrative experience desirable. Salary negotiable. Curriculum vitae and three letters of reference to: **J. F. Wilber, M.D., Head, Division of Endocrinology, Room N3W50, 22 South Greene Street, Baltimore, MD 21201** by 1 October 1991. *Equal Opportunity Employer.*

## POSITIONS OPEN

**ECOSYSTEMS ECOLOGIST.** The Department of Environmental Sciences at the University of Virginia seeks applications and nominations for a tenure-track faculty position to be filled in the fall of 1992. Minimal qualifications include a Ph.D. and postdoctoral experience with a proven record of research accomplishments. This solicitation is directed at an appointment at the beginning **ASSISTANT PROFESSOR** level, although additional experience will be considered in making the appointment. We are seeking an individual with research and teaching expertise in the area of ecosystems ecology with specific interest in areas directly relevant to global change. The candidate will be expected to participate in research being conducted at the Virginia Coast Reserve Long-Term Ecological Research site. The department is an interdisciplinary unit consisting of scientists in atmospheric science, hydrology, and geology as well as ecology, and the successful candidate will demonstrate a desire and ability to participate in projects involving the various disciplines. Send letter of application, curriculum vitae, and a list of three references (by 15 November 1991) to: **Aaron L. Mills, Department of Environmental Sciences, Clark Hall, University of Virginia, Charlottesville, VA 22903.** *The University of Virginia is an Affirmative Action/Equal Opportunity Employer.*

### ASSISTANT PROFESSOR IN PHYSIOLOGY DEPARTMENT OF PHYSIOLOGY AND BIOPHYSICS UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Applications are invited for a full-time, tenure-track position in molecular or cellular physiology at the assistant professor level starting August 1992. The successful candidate must hold a doctoral degree and is expected to develop a vigorous, independently funded research program and to participate in undergraduate and graduate teaching. She/he will join a strong department with broad expertise in cellular, molecular, and systems physiology. While a candidate with research interests in cellular and molecular aspects of cardiovascular physiology is preferred, candidates with interests outside this area will be considered. Salary will be commensurate with experience and qualifications. The deadline for receipt of applications is 1 December 1991. Interviews may take place before 1 December, but all applications received by this date will be fully considered. Applicants should submit curriculum vitae, a list of publications, a statement of future research plans, and the names and telephone numbers of at least three references to: **Dr. Philip M. Best, University of Illinois, Department of Physiology and Biophysics, 524 Burrill Hall, 407 South Goodwin Avenue, Urbana, IL 61801; telephone: 217-333-8176.** *Women and minority applicants are encouraged to apply. The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

### ASSISTANT OR ASSOCIATE PROFESSOR BIOCHEMISTRY/MOLECULAR BIOLOGY

The Department of Biochemistry at The University of Mississippi Medical Center invites applications for a tenure-track position. The department is well-equipped and has strong research programs in eukaryotic gene organization and expression, protein synthesis, ribosome biogenesis, nucleic acid biophysics, enzymology and protein chemistry. The successful applicant is expected to establish or have an independent, high quality, funded research program and to participate in the training of medical, dental and graduate students. Special consideration will be given to candidates in areas that complement current research programs. Send curriculum vitae, an outline of future research plans and the names of three references to: **Dr. Mark Olson, Chair, Department of Biochemistry, The University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216-4505.** *Equal Opportunity Employer, M/F/H/V.*

**FREE PRODUCT INFORMATION SERVICE.** Send a letter stating the specifics about your new laboratory and *Science* will put you in touch with the vendors whose products you will need. Write to: **SCIENCE New Lab Service Department, 151 Broadway, New York, NY 10036.**

## POSITIONS OPEN

The Department of Biological Sciences, University of Illinois at Chicago (UIC), has a tenure-track position at the **ASSISTANT PROFESSOR** level for a neurobiologist using modern cellular and/or molecular approaches to problems that may involve: neurophysiology; neurodevelopment; neurogenetics; or intercellular or intracellular communication. The successful candidate will be expected to develop a strong research program and contribute to teaching of undergraduate and graduate students in the neurobiology program. Consideration of candidates will begin on 15 October 1991; application deadline is 22 November 1991. Candidates should send curriculum vitae, a brief statement of research plans, and the names and addresses of three referees to:

**Neurobiologist Search Committee  
c/o Dr. Sidney B. Simpson, Jr., Head  
Department of Biological Sciences (M/C 066)  
The University of Illinois at Chicago  
Box 4348  
Chicago, IL 60680**

*UIC is an Affirmative Action/Equal Opportunity Employer.*

**REMOTE SENSING AND GIS.** Half-time, non-tenured **RESEARCH ASSISTANT PROFESSOR** position in acquisition/use of remotely sensed data and GIS in ecosystem and landscape research, College of Forest Resources, University of Washington (UW). Incumbent develops and participates in programs utilizing these technologies in projects associated with UW centers and the Long-Term Ecological Research Network. Incumbent acquires, archives and collaborates in use of remote imagery and GIS and participates in graduate education. Current support for half-time for 3 years and opportunity to seek additional funding. Requirements: Ph.D. in a bioscience or resource management and research experience in remote sensing, GIS, and computer networking. Experience in both terrestrial and aquatic ecosystems desirable. Position available 15 November 1991. Competitive salary. Send application letter, résumé and transcripts, and request three reference letters be sent to: **Dr. J. Franklin, College of Forest Resources AR-10, University of Washington, Seattle, WA 98195.** *The University of Washington is an Affirmative Action, Equal Opportunity Employer.*

**BEHAVIORAL NEUROSCIENCE/BIOPSYCHOLOGY:** Tenure-track **ASSISTANT PROFESSORSHIP** available in the Department of Psychology beginning September 1992. Applicants should have an active research program that will attract external funding. Although we will consider all applications, we are particularly interested in individuals studying the neuroanatomical organization and/or chemical makeup of neural circuits relevant to behavior. The applicant should also have a strong commitment to teaching at both the graduate and undergraduate levels. The successful candidate will become a member of a developing Biopsychology Graduate Program. There will also be an opportunity to interact with Department of Biology neuroscientists in the development of an interdisciplinary program. Send curriculum vitae, representative publications, a clear statement of future research plans, and three letters of recommendation by 1 January 1992 to: **Michael Numan, Behavioral Neuroscience Search Committee, Department of Psychology, Boston College, Chestnut Hill, MA 02167.** *Boston College is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

### ASSISTANT/ASSOCIATE/FULL PROFESSOR DEPARTMENT OF PSYCHIATRY NEUROSCIENCE RESEARCH

The Department of Psychiatry of the Uniformed Services University of the Health Sciences is seeking to fill a tenure-track research and teaching position. The department is comprised of 13 full-time faculty and seeks an individual with research interests to complement ongoing neuroscience research in: neurobiology of anxiety/depression disorders (including PTSD), psychiatric responses to traumatic events, behavioral pharmacology, neurochemical correlates of drugs and behavior, and psychoimmunology. Individuals with active research interests that complement or expand upon these areas are invited to apply. Send curriculum vitae, a description of current and anticipated research interests and the names of three references to: **Uniformed Services University of the Health Sciences, Attention CPO: Joan Ball, 4301 Jones Bridge Road, Bethesda, MD 20814-4799.** *Equal Opportunity Employer.*





**Associated  
Western  
Universities  
Incorporated**

## **CAREER OPPORTUNITIES in SCIENCE EDUCATION**

Associated Western Universities, Inc. (AWU), a consortium of 42 universities, administers science and engineering education programs on behalf of the U.S. Department of Energy (DOE). These programs provide support for faculty and students from high schools, colleges, and universities to participate in research at more than 35 DOE laboratories. AWU is located in the residential community of Holladay in southeast Salt Lake City. The city offers a diversity of cultural and other leisure activities, and the state is renowned for its opportunities for year-around outdoor recreation.

With a current staff of fifteen, AWU is seeking qualified individuals for the following positions:

### **Operations Director**

**Responsibilities:** oversight of AWU fiscal and operations activities; supervision of department managers; negotiation of federal grants and contracts and indirect costs; corporate planning; reports to the Executive Director.

**Qualifications:** record of competent financial and contracts management; knowledge of federal acquisition techniques and regulations; firm grasp of accounting principles; strong leadership abilities; excellent communication, interpersonal, organizational skills.

### **Program Manager**

**Responsibilities:** management of national and site-specific science education programs; new program development; program evaluation; long-range planning; reports to the Deputy Director.

**Qualifications:** Bachelor's degree (advanced degree preferred), with strong background in science or engineering education; experience in administration of sponsored programs desired; record of excellent communication, interpersonal, organizational skills.

AWU provides excellent benefits and salaries commensurate with qualifications and experience. To ensure full consideration, applications should be received by October 21, 1991. Send applications supported by a resume and the names, addresses and telephone numbers of three references to: Dr. Thomas G. Squires, Executive Director, Associated Western Universities, Inc., 4190 S. Highland Dr., Suite 211, Salt Lake City, UT 84124.

## **THE UNIVERSITY OF AUCKLAND New Zealand**

### **LECTURESHIP/SENIOR LECTURESHIP IN MOLECULAR GENETICS**

**School of Biological Sciences  
Department of Cellular & Molecular Biology  
(Vacancy UAC-54)**

The University of Auckland seeks a person with interests in eukaryotic molecular genetics to initiate a research programme and contribute to teaching in molecular genetics in the Department of Cellular and Molecular Biology.

The Department has 75 staff. Facilities include an automated DNA sequencer, oligonucleotide synthesis capacity, access to a gas-phase protein sequencer and a comprehensive Vax-based computer system with access to major data bases.

Applicants should have a PhD or equivalent qualification and some years of postdoctoral experience in a major research institution. Preference will be given to an appointee able to initiate a strong research programme in human molecular genetics and to interact strongly with staff in the Medical School and with DNA Diagnostics Ltd, a University-based company involved in genetic testing. For either a medically qualified or non-medically qualified applicant, there is the possibility of a joint appointment in the Department of Paediatrics section of Clinical Genetics, School of Medicine. The successful applicant will contribute to the School of Biological Sciences undergraduate and graduate teaching programme in molecular genetics and will supervise and carry out research. Opportunities also exist for interaction with major Australian research centres.

Commencing salary will be established within the ranges: Lecturer NZ\$37,440–NZ\$49,088 p.a.; Lecturer (Medical) NZ\$41,600–NZ\$49,400 p.a.; Senior Lecturer NZ\$52,000–NZ\$60,944 p.a.; Senior Lecturer (Medical) NZ\$67,808–NZ\$87,568 p.a.

Conditions of Appointment and Method of Application are available from Appointments (39747), Association of Commonwealth Universities, 36 Gordon Square, London WC1H 0PF; or from the Assistant Registrar (Academic Appointments), University of Auckland, Private Bag, Auckland, New Zealand, Fax 64-9-799 317, to whom applications should be forwarded by 15 November 1991.

Please quote Vacancy Number UAC-54 in all correspondence

The University of Auckland  
An Equal Employment Opportunity Employer

## **ASSOCIATE DIRECTOR CENTER FOR GLOBAL CHANGE AND ARCTIC SYSTEM RESEARCH UNIVERSITY OF ALASKA FAIRBANKS**

Applications are invited from candidates for the position of Associate Director of the Center for Global Change and Arctic System Research at the University of Alaska Fairbanks. The Center, established in 1990, provides a campus-wide framework for developing, coordinating, and implementing interdisciplinary research initiatives to address the role of the Arctic in the Earth system. There are presently about 300 faculty members interested in global change research on campus, and more than 50 of them receive over \$6 million in competitively-funded research support for global change studies.

The position is responsible to the Director of the Center, and the successful candidate is expected to operate on his/her initiative for the overall program and administrative activities of the Center. These activities include formulating, refining, and articulating the character of the Center; securing planning and operating funds through proposals; and generally defining and implementing the programs, image, and direction of the Center.

Qualifications for the position include a graduate degree or equivalent in a field of science or engineering relevant to global change research. Alternatively, a degree in business management and five years of progressively responsible science administrative experience, including a knowledge of science funding sources and agencies, and contract negotiations. Familiarity with global change scientific program plans is critical. The salary range begins at \$45,864.00; actual salary will depend on experience.

Requests for further information about the Center or the position can be obtained from the address below. Applications should be sent by November 1, 1991 to:

**Dr. Gunter Weller, Director  
Center for Global Change  
and Arctic System Research  
208 O'Neill Building  
University of Alaska Fairbanks  
Fairbanks, AK 99775**

The University of Alaska Fairbanks is an EO/AA Employer and Educational Institution.

Triton Diagnostics Inc., a healthcare company dedicated to the advancement of cancer management, is seeking experienced individuals for several openings. Each individual will be part of a team responsible for the development and commercialization of leading-edge *in vitro* cancer diagnostic immunoassays.

### **Senior Research Associate Protein Chemistry**

Candidates for this position will have a background in protein purification and characterization as well as extensive experience with immunochemical techniques. A degree in biological science as well as 3–5 years of relevant experience in product development are required.

### **Senior Research Associates Assay Development**

These two positions require individuals with a demonstrated track record in the development, optimization and scaleup of commercial immunoassays. A degree in biological science plus 3 or more years of industrial experience in product development are required.

Triton offers competitive salaries and benefits. For consideration, send your resume with a cover letter to: TRITON DIAGNOSTICS INC., Employee Relations, 1401 Harbor Bay Parkway, Alameda, CA 94501. EOE.



**TRITON™  
diagnostics**



# Neurobiology

Bristol-Myers Squibb, a world-wide leader in the development and marketing of sophisticated pharmaceutical, medical care, consumer and nutritional products, has exceptional opportunities for Assistant/Associate Research Scientists in CNS Drug Discovery in Wallingford, CT.

## Neurophysiology

Perform experimental protocols involving a variety of neurophysiological techniques in brain slices, cultured neurons, and *Xenopus* oocytes expressing neuronal receptors. The lab carries out basic and applied research primarily in the areas of neurodegenerative disorders and synaptic plasticity. BS/MS required in the biological sciences, with background in neurosciences. Experience in electrophysiological recording techniques helpful. **Ref #0673.**

## Neuropharmacology

Provide assistance using *in vivo* models for stroke and migraine programs. Responsibilities will include assisting in blood flow studies using radioactive materials, preparing solutions and implementing experimental protocols in compliance with established procedures, cerebrovascular pharmacology, and computerized data analysis. BS/MS required, biology, pharmacology, or animal science. **Ref #0620.**

## Neuronal Cell Biology

Provide technical assistance within the neuronal cell biology lab developing neuroprotective agents for neurodegenerative disorders. Duties include preparing neuronal cultures, evaluating effects of test agents on cultured cells, and general lab work. BS/MS in biological sciences with experience in tissue culture or cell biology. **Ref #0642.**

Bristol-Myers Squibb offers the advantages of sustained career growth, highly competitive salaries, extensive benefits and professional support in pursuing excellence. Please send resume with salary history to: **BRISTOL-MYERS SQUIBB, Pharmaceutical Research Institute, (Ref. # from above), P.O. Box 5101, Wallingford, CT 06492-7661.** Equal Opportunity Employer, M/F/H/V.



Bristol-Myers Squibb Company

## POSITIONS OPEN

### FACULTY POSITIONS IN BIOLOGY AT WAKE FOREST UNIVERSITY

The Department of Biology at Wake Forest University invites applications for three tenure-track positions to be filled at the **ASSISTANT PROFESSOR** level. *We especially invite applications from minority candidates.* Required qualifications include a Ph.D. with training and experience in one of the three fields described below. Each successful candidate will be expected to develop courses in the appropriate specialty, as well as at times teach in the core curriculum, to participate in the training of masters and doctoral students, and to establish a strong research program.

**PLANT SYSTEMATICS:** The successful candidate will have training and experience in both molecular and classical techniques of plant systematics and will develop a general course in systematics suitable for all biology majors, and possibly courses in plant taxonomy and evolutionary biology.

**DEVELOPMENTAL GENETICS:** The search is being reopened. The successful candidate will have training and experience in modern developmental genetics and will have a broad perspective on the field. Preference will be given to candidates working in the areas of the timing and location of gene activation, evolutionary aspects of the genetics of development, sensory biology or parasitology, and who will develop courses in such areas as genetics, development and the candidate's specialty.

**EVOLUTIONARY ECOLOGY:** The successful candidate will have training and experience in ecology, evolution and related fields. Preference will be given to candidates working in the areas of plant and animal interactions, population genetics, paleobiology or evolutionary theory, and who will develop courses in such areas as evolution, population ecology and genetics and a course in the candidate's specialty.

When submitting your application, indicate for which one of the three positions you are applying. Because we are concerned with excellence in teaching as well as research, please send a statement of teaching interests and experience as well as a statement of research interests, together with curriculum vitae; and have three letters of recommendation sent to: Dr. Mordecai J. Jaffe, Chairman of the Search Committee, Biology Department, Wake Forest University, Winston-Salem, NC 27109. To be considered, all applications must be received by 9 November 1991. *Wake Forest University is an Equal Opportunity Employer.*

### CALIFORNIA INSTITUTE OF TECHNOLOGY (CALTECH) FACULTY POSITION IN ENVIRONMENTAL ENGINEERING SCIENCE (EES)

The Environmental Engineering Science program at Caltech is commencing a search for a tenure-track **ASSISTANT PROFESSOR** in EES. Initial junior faculty appointment is normally for 4 years and is contingent upon completion of Ph.D. Outstanding senior candidates may also be considered. EES is an interdisciplinary graduate program bringing together engineers and scientists working on novel approaches to environmental problems, primarily concerned with air and water. We are particularly interested in applicants in the areas of environmental organic chemistry, environmental microbiology, environmental fluid mechanics, and air quality. Any candidate must have a strong interest in environmental applications, research accomplishment in one or more of the relevant areas, and evidence of ideas for a highly productive and innovative research program. Applicants should send curriculum vitae and list of publications with refereed articles clearly marked, the names of at least three references, and a statement of research and teaching objectives to: Professor J. J. Morgan, EES Search Committee Chairman, Environmental Engineering Science, Keck Laboratories 138-78, California Institute of Technology, Pasadena, CA 91125. Closing date for applications is 15 December 1991. *Caltech is an Equal Opportunity/Affirmative Action Employer and is committed to increasing the numbers of faculty who are women and underrepresented minorities. Applicants in these categories are encouraged to apply.*

**SCIENCE** welcomes placement of line classified ads by FAX. Please include name and telephone number for our confirmation call when transmitting ad to:

**FAX NUMBER: 202-682-0816**

## POSITIONS OPEN

### UNIVERSITY OF PENNSYLVANIA

The Department of Physiology seeks to fill several tenure-track positions, preferably at the **ASSISTANT PROFESSOR** level. Candidates with demonstrated strength in experimental approaches to the study of cellular and/or molecular mechanisms are encouraged to apply. Please send curriculum vitae, a statement of research interests, and names of three references to whom the committee may write for further information.

**Faculty Search Committee  
Department of Physiology  
University of Pennsylvania  
Philadelphia, PA 19104-6085**

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

**PHYSIOLOGIST.** A tenure-track faculty position at the **ASSISTANT, ASSOCIATE, or FULL PROFESSOR** level in the Department of Veterinary and Comparative Anatomy, Pharmacology, and Physiology at Washington State University is available for a Ph.D. physiologist with at least 2 years of postdoctoral training and research experience in adaptation of skeletal, cardiac, or vascular smooth muscle. A preferred area of applicant interest would be on gene-mediated responses of muscle to physiologic (including exercise) or pathologic stressors. An alternative area of interest would be on tissues that affect muscle activity, such as vascular endothelium and its effects on vascular smooth muscle. However, exceptional candidates with other muscle-related interests would be considered. Candidates should indicate the level of appointment for which they are applying. To be considered at the full-professor level, a candidate must have an outstanding record as a research scientist. Salary commensurate with qualifications and experience. Send curriculum vitae, names, addresses, and telephone numbers of four professional references; and a statement of research interests to: Dr. Kenneth Campbell, Chair of Search Committee, Department of Veterinary and Comparative Anatomy, Pharmacology and Physiology, Washington State University, Pullman, WA 99164-6520. Application review will begin 1 November 1991. *Washington State University is an Affirmative Action/Equal Opportunity Employer. Protected group members are encouraged to apply.*

### CULTURAL/SOCIOCULTURAL PSYCHIATRY FELLOWSHIP DIRECTOR

The Department of Psychiatry and Behavioral Sciences, University of Oklahoma Health Sciences Center, is seeking a psychiatrist for a full-time position at the **ASSISTANT PROFESSOR/ASSOCIATE PROFESSOR** level. Applicants must demonstrate experience and interest in the areas of sociocultural psychiatry and/or epidemiology. The position involves administrative, educational, clinical, and research opportunities; and the opportunity to work with students, residents, fellows, and a multidisciplinary faculty. Patient populations include Native Americans, Afro-Americans, Asians, and Hispanics in a number of different settings. Send curriculum vitae, reprint and names of three references to either Joseph Westermeyer, M.D., Ph.D., or Mark Williams, M.D., at University of Oklahoma Health Sciences Center, Department of Psychiatry, P.O. Box 26901, Oklahoma City, OK 73190-3048. *University of Oklahoma is an Affirmative Action/Equal Opportunity Employer.*

**LUCE CHAIR IN COGNITIVE SCIENCE.** The University of Rochester has an open position in cognitive science, funded by the Henry Luce Foundation. We seek applications from people with strong research programs in such areas as language, learning, vision, cognitive neuroscience, philosophy of mind. The rank is open from a junior associate professor to senior full professor. The university has an established undergraduate major in cognitive science. We also have an active interdisciplinary structure with about 20 current graduate students having common interests in cognitive science. The holder of the Luce chair will be a member of at least one of the constituent programs or departments: computer science, linguistics, neuroscience, philosophy, psychology. *The University of Rochester is an Equal Opportunity Employer. We urge women and minority candidates to apply for this position.* Send materials to: Professor Thomas G. Bever, Cognitive Science Director, Meliora Hall, University of Rochester, Rochester, NY 14627. For full consideration, applications should be received by 15 November 1991.



1992

# PREDOCTORAL FELLOWSHIPS IN BIOLOGICAL SCIENCES

66 Fellowships will be awarded by the Howard Hughes Medical Institute for study toward a Ph.D. or Sc.D. degree in the biological sciences listed below. Awards, based on an international competition each year, focus on research directed to an understanding of basic biological processes and disease mechanisms. Fellowships may be held at any academic or research institution with appropriate degree programs.

- **Fellowship Terms**
- Full-time study toward the Ph.D. or Sc.D.
  - Up to five years of support possible
  - \$14,000 annual stipend, effective June 1992
  - \$11,700 annual cost-of-education allowance

- **Fields of Study**
- Continuing as eligible fields:

biochemistry	immunology	pharmacology
biophysics	microbiology	physiology
cell biology	molecular biology	structural biology
developmental biology	neuroscience	virology
genetics		
  - New eligible fields:

biostatistics	epidemiology	mathematical biology
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- **Eligibility**
- Beginning graduate study (prior study toward an M.P.H. or a medical degree does not rule out eligibility)
    - college seniors
    - first year graduate students
    - medical students and physicians (M.D., D.O., D.D.S., or D.V.M.) not past the first year of a Ph.D. or Sc.D. degree program
  - Not in a funded M.D./Ph.D. program
  - No citizenship requirements: U.S. citizens may study abroad, but others must study in the United States

- **Schedule**
- Application deadline: November 8, 1991
  - Awards announced: early April 1992
  - Fellowships start: June 1992 - January 1993

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## For 1992 Program Announcements, Eligibility Guidelines, and Applications

Hughes Fellowship Program • The Fellowship Office  
National Research Council • 2101 Constitution Avenue, N.W.  
Washington, D.C. 20418 • United States of America  
Telephone (202) 334-2872

The Howard Hughes Medical Institute welcomes applications from all qualified candidates and encourages women and members of minority groups to apply.

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## POSITIONS OPEN

### NATIONAL INSTITUTES OF HEALTH NATIONAL HEART, LUNG, AND BLOOD INSTITUTE HEALTH SCIENCE ADMINISTRATOR BASIC CARDIOVASCULAR SCIENCES BETHESDA, MARYLAND

Cardiac Functions Branch is seeking an experienced cardiovascular physiologist, biochemist or pharmacologist to provide administrative scientific support in the management and development of the branch's extramural grant program.

Candidates must have a Ph.D. or equivalent, postdoctoral research experience and a strong desire to pursue an administrative, non-laboratory career track. Excellent written and verbal communication skills required.

The candidate selected will provide leadership for established national programs and develop new programs in his/her areas of expertise. Areas of interest include cardiac and vascular smooth muscle, cardiovascular receptor and signal transduction pathways, ion channel biology, circulatory and cardiac control, performance and energetics, etc.

Applicants must be U.S. citizens. Appointment at a GS/13-14 level anticipated. Send curriculum vitae (or SF-171) to:

Personnel Officer  
National Institutes of Health  
Building 31, Room 5A28  
9000 Rockville Pike  
Bethesda, MD 20892

### CHAIR DEPARTMENT OF BIOLOGY HOWARD UNIVERSITY

Applications and nominations are invited for the position of chairperson of the Department of Biology, which will be established upon the merger of the existing Departments of Botany and Zoology on 1 July 1992. The new department will have 30 faculty members, approximately 600 undergraduate majors, and 50 graduate students. Candidates should have a distinguished record of consistent research productivity and extramural support, a commitment to teaching, and a willingness to exercise innovative and resourceful leadership in building the department to a level of prominence. The area of concentration is open. Applicants should qualify for the rank of full professor. Salary is commensurate with qualifications and experience. Applicants should send, by 15 October 1991, curriculum vitae, names and addresses of three references, and a statement of educational and administrative philosophies to:

Dr. Theodore A. Bremner, Chairman  
Biology Search Committee  
P.O. Box 619, Administration Building  
Howard University  
Washington, DC 20059

*Howard University is an Equal Opportunity Employer.*

**CHAIRMAN, DEPARTMENT OF PHYSIOLOGY.** Georgetown University School of Medicine. The Georgetown University School of Medicine is seeking a new Chairman of the Department of Physiology. Candidates are expected to demonstrate the capacity for leadership of an active research program in molecular or cellular physiology and direct the teaching programs of the Department of Physiology which lead to M.S., M.D. and Ph.D. degrees. The Georgetown University Medical Center provides a strong environment in basic and clinical research and its expanding programs provide an environment conducive to growth in physiology. Individuals interested in this opportunity should apply to: **Jeffrey Cossman, M.D., Chairman, Physiology Search Committee, Georgetown University School of Medicine, 3900 Reservoir Road, N.W., Washington, DC 20007. Georgetown University is an Equal Employment Opportunity/Affirmative Action Employer.**

### DIRECTOR, MICROSURGERY LABORATORY

The orthopaedic hand and microsurgery laboratory of the Medical Research Institute in San Francisco conducts research in limb preservation and transplantation. The funding of this position is independent of outside grants. Applicants should have a Ph.D. or extensive research experience in immunology or physiology. Inquiries should be directed to: **Dr. Levinsohn, 2200 Webster Street, San Francisco, CA 94115. Telephone: 415-753-0222.**

## POSITIONS OPEN

**DEPUTY ASSOCIATE DIRECTOR.** Geriatric Research Education and Clinical Center (GRECC), American Lake Veterans Affairs Medical Center (VAMC), Tacoma, Washington. Senior academic physician-investigator with expertise and experience in clinical or basic aspects of neuroscience to direct American lake component of combined Seattle/American Lake VAMC GRECC. Attractive opportunity to expand research and clinical programs in geriatric psychiatry, geriatric medicine and neuroendocrinology. Current research programs are related to neurobiology of dementia, neuroendocrinology of aging, and neuropeptide biosynthesis and processing. Research academic appointment in appropriate department at University of Washington School of Medicine. Academic rank. Salary and terms negotiable. Reply to: **Daniel Dorsa, Ph.D., Associate Director, GRECC (182B), Seattle VAMC, 1660 South Columbian Way, Seattle, WA 98108. An Equal Opportunity Employer.**

### DIRECTOR OFFICE OF SCIENTIFIC PUBLIC AFFAIRS INSTITUTE OF FOOD TECHNOLOGISTS

The Institute of Food Technologists (IFT) is the 25,000-member society for food science and technology. The Director, Office of Scientific Public Affairs, is responsible for providing leadership, direction and coordination for IFT's outreach programs. The latter provide accurate science-based information concerning issues involving food science and technology to members, the media, governmental agencies and the general public. Major programs involve the Regional Communicators and the Expert Panel on Food Safety and Nutrition. The director will work with IFT leadership and members to develop new scientific public affairs programs as needed to meet identified needs. The director will also oversee the development of a program to improve the visibility and credibility of IFT within the legislative and regulatory community in Washington.

Qualifications for this position include: Ph.D. in food science/technology or closely related field preferred; an established reputation in communication on issues involving food science/technology, processing and safety; and demonstrated excellence in oral and written communication skills. Experience in securing research grants and/or contracts is also desirable, but not mandatory.

The position is available immediately. A letter of application current résumé, and names, addresses, and telephone numbers of three references should be sent to: **Mr. Daniel E. Weber, Executive Director, Institute of Food Technologists, 221 North LaSalle Street, Chicago, IL 60601.** Review of applications will start on 15 December 1991 and continue until a qualified candidate is obtained.

*IFT, an Equal Opportunity, Affirmative Action Employer, offers an attractive compensation and benefit package.*

**HERBARIUM CURATOR/INSTRUCTOR.** A 12-month, recurring position in plant systematics. The successful candidate will be responsible for curation of the Oregon State University Herbarium, teaching a course in plant taxonomy and contributing to the introductory biology curriculum, and providing identifications of higher plants as part of the University Extension Service. Ph.D. degree and expertise in herbarium curation are required. A knowledge of, or willingness to learn, the flora of Oregon is essential. Applicants should submit curriculum vitae, samples of publications, copies of academic transcripts, a statement of interests in teaching and herbarium curation, and three letters of recommendation to: **Chairperson, Herbarium Curator Search Committee, Department of Botany and Plant Pathology, Oregon State University, Cordley Hall 2082, Corvallis, OR 97331-2902. Telephone: 503-737-3451.** Closing date: 31 December 1991. Position available: 1 July 1992. *Oregon State University is an Affirmative Action/Equal Opportunity Employer and has a policy of being responsive to the needs of dual-career couples.*

**SCIENCE** recruitment ads reach thousands of scientists in all disciplines, worldwide. Classified Advertising telephone: 202-326-6555. FAX: 202-682-0816.

## POSITIONS OPEN

The Swiss Federal Institute of Technology Zurich (ETHZ) invites applications for a

### FACULTY POSITION IN PLANT ECOLOGY

The chair is open to candidates with research experience in both plant ecology and plant sociology, i.e. the taxonomic plant units and their relationship to specific ecosystems. An important research area is the monitoring of changes in plant community compositions due to environmental impacts.

Teaching duties focus on courses in plant ecology, geobotany and plant systematics for students of environmental science and biology. The new professor is also responsible for the basic training in these subjects at other departments of the ETHZ.

Candidates must hold a university degree and have a successful record of research and teaching activities in these fields.

Please submit your application together with a detailed résumé and a list of publications to: **President of ETH Zurich, Professor Dr. J. Nüesch, ETH Zentrum, CH-8092 Zurich,** no later than 31 October 1991. *In its effort to increase the number of women in academic top positions, the ETHZ specifically invites applications from women.*

### JUNIOR LEVEL POSITION DEPARTMENT OF MOLECULAR BIOLOGY PRINCETON UNIVERSITY

The Department of Molecular Biology at Princeton University invites applications for a junior level position from investigators studying cell/cell communication. Areas of interest include cell surface-mediated signal transduction, cell/cell adhesion, or ligand-receptor interaction and can be approached from a genetic, molecular genetic, biochemical, or immunological perspective. Candidates should have a Ph.D. degree and relevant postdoctoral experience. Applicants should send curriculum vitae, a summary of research interests, and the names of at least three references to:

Cell Interaction Search Committee  
Department of Molecular Biology  
Princeton University  
Princeton, NJ 08544

Application deadline is 1 November 1991. *Princeton University is an Equal Opportunity/Affirmative Action Employer.*

University of California, San Diego. **TENURED/TENURE-TRACK POSITION IN ORGANIC CHEMISTRY.** The Chemistry Department of the University of California, San Diego, is recruiting for a position in the area of organic chemistry. Candidates must have a Ph.D. and a demonstrated ability for creative research and for teaching at the undergraduate and graduate levels. Candidates at all levels are encouraged to apply. Open position subject to availability of funds. All applications received through 15 November 1991 will be given thorough consideration. Salary commensurate with experience and based on the University of California pay scale. Candidates should send curriculum vitae, a list of publications, reprints of up to five representative papers, a summary of research plans, and names and addresses of three references to: **Chairman, Organic Chemistry Search Committee, University of California, San Diego, Department of Chemistry-0332, 9500 Gilman Drive, La Jolla, CA 92093-0332. The University of California is an Equal Opportunity/Affirmative Action Employer.**

### JUNIOR LEVEL POSITION DEPARTMENT OF MOLECULAR BIOLOGY PRINCETON UNIVERSITY

The Department of Molecular Biology at Princeton University invites applications for a junior level position from investigators who use *Arabidopsis* as an experimental system. Areas of specialization may include (but are not restricted to) genetics, molecular genetics, developmental biology, or genome analysis. Candidates should have a Ph.D. degree and postdoctoral experience in *Arabidopsis* molecular genetics. Applicants should send curriculum vitae, a summary of research interests, and the names of at least three references to:

Arabidopsis Search Committee  
Department of Molecular Biology  
Princeton University  
Princeton, NJ 08544

Application deadline is 1 November 1991. *Princeton University is an Equal Opportunity/Affirmative Action Employer.*



## Biochemistry Research Biologist

Searle, a worldwide leader in the pharmaceutical industry, has an immediate opening for an experienced laboratory professional to work in the Department of Cardiovascular Diseases Research in St. Louis, Missouri. The individual will participate in basic and applied research programs directed toward the discovery of novel cardiovascular therapeutic agents.

The successful candidate should have a BS/MS in Biochemistry, Pharmacology or a related discipline with a minimum of 2 years of laboratory experience. Requirements include proficiency in assay development and experience in several of the following areas: receptor binding methodology, immunoassays, enzyme assays, cell culture and column chromatography. Strong communication skills are necessary.

Searle, a wholly owned subsidiary of Monsanto Company, offers a competitive salary and benefits plan. Qualified candidates should send a resume, in confidence, to:

"Research Biologist"; Attn: K. Bumgarner - BB4E; SEARLE; 700 Chesterfield Village Parkway; St. Louis, MO 63198. An Equal Opportunity Employer.

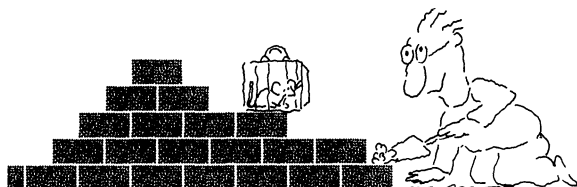
**SEARLE**

## RADIATION EFFECTS RESEARCH FOUNDATION HIROSHIMA AND NAGASAKI, JAPAN Editor/Publication Coordinator

The U.S. National Academy of Sciences (NAS) is seeking an editor/publication coordinator to work at the Radiation Effects Research Foundation (RERF) in Hiroshima, Japan. The RERF, a binational foundation equally funded by the governments of Japan and the United States, and equally managed by representatives of the two countries, conducts research on the health of survivors of the atomic bombings of Hiroshima and Nagasaki. Research includes studies in medicine, pathology, epidemiology and biostatistics, molecular biology, and cytogenetics, resulting in 25-40 technical reports each year drafted in English by U.S. and Japanese scientists, and produced in-house via DTP technology. The publication coordinator is the primary copy editor and production/layout coordinator for the Foundation's English-language publications. Interacts with authors during manuscript peer review. Maintains timeliness of publication process. Edits biomedical manuscripts to meet the in-house style and requirements of major scientific journals. Assists in writing and producing quarterly international newsletter. Assists in ongoing activities related to computerized manuscript tracking and online retrieval of the Foundation's 40-year collection of publications. Requires 5 or more years' experience as a writer/editor in the health sciences and knowledge of production coordination; basic computer literacy emphasizing the practical aspects of desktop publishing (word processing, file compatibility, graphics formats); ability to work under deadline pressure. Willingness to learn basic Japanese verbal skills. Salaries are commensurate with experience and are supplemented by relocation, housing, cost-of-living, and home-leave benefits. Tuition at international schools is provided for dependent children through high school age. Individuals who work in Japan are employees of NAS and RERF. Typical appointments are for two years. Please send resume and the name, address, and FAX number (if available) of three references in confidence to: NRC/RERF, NAS 342 (CB), 2101 Constitution Avenue, NW, Washington, DC 20418. EOE



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The Global Weekly of Research

## POSTDOCTORAL SCIENTIST

### BIOMOLECULAR DISCOVERY

SmithKline Beecham Pharmaceuticals, a leader in innovative pharmaceutical research, has an opening for a Postdoctoral Scientist to participate in the discovery of novel antineoplastic agents utilizing specific mechanism-based screens for natural products from marine organisms, terrestrial plants and microbial sources. The successful candidate will be involved in devising novel screens to selectively identify inhibitors of targets relevant to the growth and progression of neoplastic cells. Targets of current interest include recombination pathways involved in DNA damage repair and signal transduction pathways involved in growth regulation. In addition, the successful candidate will collaborate closely with other scientists in the group in identifying lead compounds from screening natural product extracts in mechanism-based screens and will have responsibility for biochemical characterization of lead compounds that are discovered.

Requirements include a Ph.D. in Biochemistry, Pharmacology, Molecular Biology or a related field with 0-2 years of postdoctoral research experience. Skills in yeast genetics are highly desirable since many of the assay methods involve construction of specific yeast mutants. Demonstrated productivity as evidenced by publications in the scientific literature required.

Our state-of-the-art research facility is located in suburban Philadelphia, near Valley Forge, PA. SmithKline Beecham Pharmaceuticals provides a stimulating and challenging work environment based on creativity, commitment and teamwork. We offer an attractive compensation/benefits/relocation package. For confidential consideration, please send your C.V. and the names of three references to: Nancy Hasson, H0183, SmithKline Beecham Pharmaceuticals, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V

**SB**  
**SmithKline Beecham**  
Pharmaceuticals

## Geisinger Clinic

### ASSOCIATE SCIENTIST POSITION

Position available for Associate Scientist (three years post-doctoral experience) and/or postdoctoral fellow. The successful applicant will be engaged in research on the biochemical and molecular mechanisms by which angiotensin peptides and other hormonal and pharmacological stimuli mediate cardiac muscle cell growth. There will also be the opportunity to engage in research defining the role of a localized intracardiac renin-angiotensin system in mediating cardiac muscle cell growth, with an emphasis on the regulation of the precursor genes for this system.

Competitive salary and fringe benefits are available. Please send CV and three names or letters of reference to: **Dr. Kenneth M. Baker, Weis Center for Research, Geisinger Clinic, North Academy Avenue, Danville, PA 17822-2611.** Equal opportunity employer M/F/H/V.

**Geisinger**

## NEUROETHOLOGIST

National Institute of Mental Health  
Intramural Research Program

The NIMH is now accepting applications for the position of head, Unit on Neuroethology within the Laboratory of Neurophysiology. Applicants must hold a doctoral degree or equivalent and be interested in joining an established research program that includes behavioral neurophysiology, developmental and functional neuroanatomy, and developmental biopsychology. The successful candidate should have post-doctoral experience and will be expected to head an independent research program. The laboratory facilities are located at the NIH Animal Center in a rural setting approximately 30 miles west of the NIH Bethesda campus near the town of Poolesville, Maryland. Researchers in any aspect of neuroethology will be considered, but those concentrating on vertebrate central nervous systems are especially encouraged to apply. Excellent facilities exist for mammalian neuroethology, including primate research. Tenure status and salary will depend upon the successful candidate's experience and research credentials. Salary ranges from approximately \$35,000 to \$97,500 (plus full Federal benefits), depending on training and experience, and appointment mechanism. Send C.V., bibliography, a statement of future research plans and three letters of reference to:

**Steven P. Wise, Ph.D., Chief  
Laboratory of Neurophysiology  
National Institute of Mental Health  
P. O. Box 289  
Poolesville, MD 20837**

NIMH is an Equal Opportunity Employer.

## POSITIONS OPEN

### FACULTY POSITIONS IN MOLECULAR MEDICINE AND EPIDEMIOLOGY FRED HUTCHINSON CANCER RESEARCH CENTER

Faculty positions at junior and senior levels will be available in the Program in Molecular Medicine in new laboratory facilities scheduled for completion in November 1992. We are seeking independent scientists with demonstrated capability in applying the tools of molecular and cellular biology to problems relevant to human disease. Areas of interest include, but are not limited to, molecular epidemiology, genetics, virology, immunology, gene therapy, stem cell biology, transgenic models, growth factor research and carcinogenesis. Interested scientists should send curriculum vitae, a brief summary of research interests and plans, and three letters of reference to:

**Search Committee  
Program in Molecular Medicine, M120  
Fred Hutchinson Cancer Research Center  
1124 Columbia Street  
Seattle, WA 98104**

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**POSTDOCTORAL ASSISTANT.** Position available immediately to develop relevant biomarkers of exposure and to assess the relationship of DNA adduct formation with frequency of mutation in oncogenes. Applicant should have experience with isolation of DNA from paraffin blocks, <sup>32</sup>P-postlabeling, and molecular biology techniques. Send biographic sketch and two letters of reference by 15 October 1991, to: **David Warshawsky, Ph.D., Department of Environmental Health, University of Cincinnati, Cincinnati, OH 45267-0056.** An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL POSITIONS IN MOLECULAR NEUROBIOLOGY.** Two positions available to participate in NIH-funded vision research projects that focus on the control and expression of proteins involved in phototransduction and retinal degeneration. Experience with basic molecular techniques required. Send curriculum vitae and the names of three references to: **Drs. K. Palczewski and A. Polans, R. S. Dows Neurological Sciences Institute, Good Samaritan Hospital and Medical Center, 1220 NW 20th Avenue, Portland, OR 97209.** An Equal Opportunity and Affirmative Action Employer.

**POSTDOCTORAL POSITION.** Available immediately in the Oklahoma Center for Molecular Medicine (OCMM) Transgenic Animal Facility. The OCMM Transgenic Facility is a state-funded research support laboratory that is located in the biology department at the University of Tulsa, an independent, comprehensive university. The successful candidate will be involved in the operation of the Transgenic Facility as well as developing his/her own project. The primary emphasis of research in the laboratory is on the development of myelination in the CNS, but opportunities exist to collaborate with other members of the OCMM on a variety of projects. Experience in molecular biology required, and in transgenic technology and/or homologous recombination desired. Send curriculum vitae and names and telephone numbers of three references to: **Dr. N. L. Nadon, Biology Department, University of Tulsa, 600 South College Avenue, Tulsa, OK 74104.** Application deadline: 31 October 1991. *The University of Tulsa, an Equal Opportunity/Affirmative Action Employer, is committed to diversifying its faculty and staff. Members of underrepresented groups (people of color, people with disabilities, women, veterans, etc.) are strongly encouraged to apply.*

**POSTDOCTORAL POSITION.** Available immediately through an NCI Clinical Nutrition Research Unit grant. Research instructor or research assistant professor will assist in day-to-day operations of in vivo cancer chemoprevention studies and will develop own research interest. Experience with cancer models in rodents and with nutritional biochemical techniques desired. Salary range: \$28,000 to \$35,000. Send curriculum vitae to: **Dr. Carlos Krumdieck or Dr. Clinton J. Grubbs, Department of Nutrition Sciences, University of Alabama at Birmingham (UAB), 1629 University Boulevard, Birmingham, AL 35294.** UAB is an Affirmative Action/Equal Opportunity Employer.

## POSITIONS OPEN

**POSTDOCTORAL POSITIONS IN MOLECULAR BIOLOGY** to study protein:protein and protein:DNA interactions as they pertain to signal transduction and gene regulation. Projects include (1) transcriptional regulation during skeletal muscle development and (2) biochemical mechanisms controlling transformation by the *myc* and *ras* oncogenes. Applicants should send curriculum vitae and the names and addresses of three references to: **Dr. Stephen F. Konieczny (Project 1) or Dr. Elizabeth J. Taparowsky (Project 2), Department of Biological Sciences, Purdue University, West Lafayette, IN 47907.** Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL POSITION.** Available immediately to study molecular mechanisms involved in cell transformation by growth factors and oncogenes. Research is focused on characterization of the Jun oncoprotein with respect to structural and functional properties required for transformation as well as identification and characterization of specific Jun-regulated target genes which may be involved in oncogenesis. If interested, contact: **Dr. Timothy Bos, Department of Microbiology and Immunology, Eastern Virginia Medical School (EVMS), P.O. Box 1980, Norfolk, VA 23501.**

### POSTDOCTORAL POSITION

Two-year position beginning January to June 1992 to investigate transcriptional/posttranscriptional regulation of energy metabolism in mammalian brain. Requires prior experience in cell and molecular biology/enzymology and protein chemistry to be applied to study the coordinate control of glycolysis and mitochondrial substrate utilization in cultured brain cells under various developmental, physiologic and pathologic conditions. Provide curriculum vitae and references to: **Peter W. Stacpoole, Ph.D., M.D., Department of Medicine, Box 100226, University of Florida College of Medicine, Gainesville, FL 32610-0226.**

*An Equal Employment Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION.** Available for research on the role of the inositol phosphate cascade in visual transduction in laboratory using electrophysiological and pharmacological techniques.

Send curriculum vitae and references to: **Dr. Alan Fein, Department of Physiology, University of Connecticut Health Center, Farmington, CT 06030.**

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

**POSTDOCTORAL POSITION** in molecular biology available immediately to study genes encoding secretory proteins produced by nematodes. Some experience in constructing libraries, PCR, and gene cloning and sequencing is required. Send curriculum vitae, a brief statement of research interests, and names and addresses of three references to: **Richard S. Hussey, Department of Plant Pathology, University of Georgia, Athens, GA 30602.**

**POSTDOCTORAL POSITION.** Available immediately. Research will focus on a gene regulation and phosphorylation pathway involving histidine kinases in *E. coli*. Candidates with expertise in molecular biology, and/or biochemistry are desired. Please send curriculum vitae, names of references, and statement of research interests to: **Dr. Steven Forst, Department of Biological Sciences, University of Wisconsin (UWM), P.O. Box 413, Milwaukee, WI 53201.** UWM is an Equal Opportunity/Affirmative Action Employer.

### SMITHSONIAN INSTITUTION FELLOWSHIP PROGRAM

**GRADUATE STUDENT, PRE-, POST-, AND SENIOR POSTDOCTORAL FELLOWSHIPS** in American history and material culture, anthropology, biological sciences, earth sciences, history of art, history of science and technology. Tenable in residence at the Smithsonian and its research facilities. Stipends and tenures vary. Deadline: 15 January annually. Contact: **Smithsonian Institution, Office of Fellowships and Grants, 955 L'Enfant Plaza, Suite 7300, Desk S, Washington, DC 20560.** Telephone: 202-287-3271. *Awards are based upon merit, without regard to race, color, religion, sex, national origin, age, or condition of handicap of applicant.*



## STUDY DIRECTOR

### Health Effects of Radiation

The Commission on Life Sciences of the National Research Council seeks a study director to plan and execute studies of the somatic and genetic effects induced in humans exposed to radiation. The successful applicant will serve as the primary staff officer for one or more committees of 10 to 15 expert volunteers over a period of 2 to 3 years. Requires a Ph.D. or M.D. or equivalent experience in a field related to radiation biology, at least 5-10 years of experience in conducting and managing sponsored research programs, demonstrated ability to plan, organize, and conduct a complex research program involving multiple disciplines and science closely linked to difficult risk-management decisions, and ability to direct and motivate work by both volunteer committee members and support staff. Applicant should also be skilled in communicating with sponsors and the general public in both written and oral presentations. Please send curriculum vitae or professional biography and letter of interest in confidence to: NRC/NERF, NAS 342 (CE), 2101 Constitution Avenue, NW, Washington, DC 20418. EOE



## BIOANALYTICAL STAFF POSITION

The Procter & Gamble Company has an immediate entry-level opening for a Ph.D. bioanalytical chemist at its Miami Valley Laboratories in Cincinnati, Ohio. The degree may be in either analytical or biochemistry. The project will involve the development and validation of methods to analyze pharmaceuticals in a variety of matrices with special emphasis on ultra-trace measurements in biological fluids. The position requires experience in methods development using a variety of techniques, instrumentation (HPLC, GC/MS) and immunoassays. Strong consideration will be given to applicants with experience in the characterization of biologics (proteins, peptides). An understanding of GLP/GMP systems, strong problem-solving skills, the

ability to set and achieve goals, good communication and teamwork skills are also desired.

Besides offering a stimulating environment for professional and personal growth, we offer a fringe benefit package (medical, dental, profit sharing) that ranks in the top 5% of U.S. corporations.

Candidates must be presently authorized to work in the U.S. on a full-time basis. Resumes, with a list of publications, should be sent to:

Dr. N. Gary Howell, Manager  
Ph.D. Recruiting  
Bioanalytical Research Position  
Dept. LC  
The Procter & Gamble Company  
P.O. Box 398707  
Cincinnati, OH 45239-8707

*An Equal Opportunity Employer.*

# Procter & Gamble

## Research SERVICE LEADER Preclinical Communications

Wyeth-Ayerst, one of the world's largest pharmaceutical companies, has an immediate opening for an experienced senior staff member to oversee preparation of critical preclinical documents for the Drug Safety Evaluation Division.

The successful candidate will be responsible for developing and managing a preclinical communications group and will prepare and oversee the development of technical reports, global regulatory submissions, manuscripts, and varied written communication. PhD with Biomedical scientific background and demonstrated communications skills is highly desirable.

We offer an excellent salary, comprehensive benefits, opportunity for professional growth and a choice location in North-east NY State with lakes for sailing, mountains for climbing and skiing, beaches for swimming as well as Universities and cultural centers within an hour's drive. Advance your career and your quality of life. Send your resume with salary requirements to: Mr. Gary Wagoner, Personnel Dept., Wyeth-Ayerst Laboratories, 64 Maple Street, Rouses Point, NY 12979. Equal Opportunity Employer M/F/H/V



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**A**t Becton Dickinson, people don't just make discoveries—they make a difference. That's because our research is changing the way health care services are delivered, from innovative rapid diagnostic tests to advanced polymers for medical devices. And our emphasis on individual achievement means your contributions to our success can have a significant effect on your own. Make an impact, at Becton Dickinson.

### SCIENTIST, ANTIBODY PERFORMANCE ENGINEERING TEAM

The successful candidate will develop methods capable of effectively identifying, selecting, and characterizing the activity of engineered antibodies, and bio-synthetic receptors, along with conventional antibodies. Will be pivotal member of the project team.

Requires Ph.D. in Molecular Immunology or Immunochemistry, as well as a published record of accomplishment including state-of-the-art assay methods. Must have 3 to 5 years of experience utilizing a variety of immunoassay systems. Strong quantitative and analytical skills with mathematical and statistical background to address binding constant derivatization also needed. Industrial experience with immunoassay applications preferred. A working understanding of modern molecular biology techniques and their potential for antibody development and experience with recombinant-deprived material would be a plus.

**A**t Becton Dickinson, we offer highly competitive salaries, comprehensive benefits, and the stimulation of working in North Carolina's celebrated Research Triangle Park. For immediate consideration, please send your resume to **Human Resources, Becton Dickinson & Company Research Center, 21 Davis Drive, Research Triangle Park, NC 27709.** AA/EEO Employer.

## BECTON DICKINSON

THE REWARDS OF DISCOVERY

## POSITIONS OPEN

### UNIVERSITY OF LEICESTER DEPARTMENT OF ZOOLOGY MOLECULAR POPULATION GENETICS OF AMPHIBIANS

A **POSTDOCTORAL POSITION** is available for a period of 1 year for studies of genetic differentiation among toad and newt populations. The study will involve the isolation of polymorphic minisatellite probes for use in single locus DNA fingerprinting, and possibly PCR analysis of mtDNA and microsatellite loci. Applicants should have experience of population or molecular biology, and should be keen to learn and apply new techniques. Salary on the RAAI scale £11,969 to £19,073 per annum (1 April 1991 Interim Scales). Apply immediately with curriculum vitae and the names of two academic referees to: **Dr. T. A. Burke, Zoology Department, University of Leicester, Leicester LE1 7RH, United Kingdom. Telephone: 0533 523351, FAX: 0533 523330.**

**POSTDOCTORAL ASSOCIATE.** Position available immediately to study the regulation of protein ubiquitination. Experience in either biochemistry or yeast genetics desired. Send curriculum vitae and three letters of reference to: **Dr. David K. Gonda, Department of Molecular Biophysics and Biochemistry, Yale University School of Medicine, 333 Cedar Street, P.O. Box 3333, New Haven, CT 06510. An Equal Opportunity Employer.**

### POSTDOCTORAL FELLOWSHIPS IN VECTOR BIOLOGY

The Center for Insect Science, through a grant from the John D. and Catherine T. MacArthur Foundation, is offering fellowships to study various aspects of vector biology. Ongoing research projects, mostly on mosquitoes, include biochemistry and pharmacology of salivation, biochemistry and molecular biology of gut enzymes, the molecular basis to lipid and iron transport, hormonal control of development and oogenesis, and the search for effective molecular transformation tools in mosquitoes.

The Center for Insect Science includes over 60 research laboratories in the Departments of Biochemistry, Ecology and Evolutionary Biology, Entomology, Molecular and Cellular Biology, Neurobiology, Pharmaceutical Science and Veterinary Science at the University of Arizona in Tucson, the USDA-ARS Carl Hayden Bee Research Center in Tucson, and the Department of Zoology at Arizona State University in Tempe. Appointments are for 2 years, depending on availability of funds and satisfactory performance. In addition to a stipend, fellows receive funds to support their research and are expected to develop independent and collaborative projects.

Applicants should send an introductory cover letter with statement of research interests, curriculum vitae, evidence of academic background and degrees earned, and three letters of recommendation to: **Dr. Henry Hagedorn, Director, Center for Insect Science, 430 Forbes Building, University of Arizona, Tucson, AZ 85721.** The review of applications will begin 11 October 1991 and continue until positions are filled. *Applications from women and members of minority groups are encouraged. The University of Arizona is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL FELLOWSHIP IN DEPARTMENT OF DERMATOLOGY.** Project involves the molecular detection of malignant T-cells in cutaneous T-cell lymphoma with the development of new therapeutic strategies targeting the T-cell receptor as a tumor-specific antigen. Experience in molecular biology preferred. Send curriculum vitae and references to: **Stuart R. Lessin, M.D., Department of Dermatology, University of Pennsylvania, 238 Clinical Research Building, 422 Curie Boulevard, Philadelphia, PA 19104. FAX: 215-573-2033. An Equal Opportunity Employer.**

A position is available for a **POSTDOCTORAL FELLOW** to work on molecular genetic analysis of parvovirus DNA replication and gene expression. A background in molecular biology and experience in recombinant DNA technology are required. The position is available immediately. Please send curriculum vitae and letters of reference to: **Dr. Emmanuel A. Faust, Department of Biochemistry, Sir Charles Tupper Medical Building, Dalhousie University, Halifax, Nova Scotia, B3H 4H7, Canada. Telephone: 902-494-8899, FAX: 902-494-1355.**

## POSITIONS OPEN

**POSTDOCTORAL FELLOW: NEUROPHYSIOLOGY.** Position available for Ph.D. or M.D. with experience in electrophysiology, to join ongoing studies on ionic mechanisms of anoxic injury in CNS. Experience in electrophysiology is essential. Prior experience with computers, or with optical imaging, would be helpful. Excellent opportunities for collaboration with workers in other disciplines, including ultrastructure, freeze-fracture, immunocytochemistry, computer simulation, membrane biophysics, and pharmacology. Send curriculum vitae, three letters of reference and statement of interest to: **Bruce R. Ransom, M.D., Ph.D., or Stephen G. Waxman, M.D., Ph.D., Department of Neurology, LCI 701, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.**

*Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL FELLOW FOX CHASE CANCER CENTER

Research involves the study of molecular mechanisms of anticancer drug action in colon tumors. Familiarity with methods of molecular biology preferred. Submit résumé and names of three references to: **Dr. Peter O'Dwyer, c/o Personnel Representative POD, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111. Equal Opportunity Employer.**

**POSTDOCTORAL (RESEARCH ASSOCIATE).** Position is open for experimental and/or theoretical work on the conformation of nucleic acids in solution. Salary: \$25,000. Please send curriculum vitae with names and telephone numbers of references, as well as three letters of recommendation to: **W. Curtis Johnson, Biochemistry/Biophysics, Oregon State University (OSU), Corvallis, OR 97331-6503.** No decision before 30 October 1991, but closing may be extended. *OSU is an Affirmative Action/Equal Opportunity Employer, and is responsive to dual-career couples.*

**RESEARCH ASSOCIATE.** To conduct independent research in the area of control analysis and manipulation of carbohydrate metabolism in rice plants. This will involve introducing cloned genes with different catalytic and regulatory properties into transgenic rice plants and then mathematically analyzing the effects on metabolite levels and the flux through key steps in carbohydrate metabolism. Will supervise graduate students and technicians and also write research reports and grant proposals. Salary: \$27,000 per year, 40 hours per week. Requires Ph.D. in biochemistry and 3 years of related experience in research in plant molecular biology and mathematical analysis of chemical processes. Apply at the **Texas Employment Commission, Bryan, Texas,** or send résumé to: **Texas Employment Commission, TEC Building, Austin, TX 78778, Job Order #6521421. Ad paid by an Equal Employment Opportunity Employer.**

**RESEARCH ASSOCIATE.** Position available for a recently graduated Ph.D. to develop new methods for culture of mammalian preimplantation embryo with emphasis on blastocyst. The work has NIH support for the next 5 years. Experience in embryo culture desired, some knowledge of cell physiology and interest in advanced experimental design preferred. For consideration please send curriculum vitae to: **Dr. John D. Biggers, Harvard Medical School, Laboratory of Human Reproduction and Reproductive Biology, 45 Shattuck Street, Boston, MA 02115.**

### RESEARCH SCIENTIST T-CV SURGERY

Faculty position for M.D. or Ph.D. to develop and direct research laboratory dedicated to a broad range of problems in cardiothoracic surgery. Involves close working relationship with group of academic surgeons, whose research interests include: animal models of complex congenital heart disease, myocardial protection, ventricular assist devices, skeletal muscle, cardiac assist, and cardiac and pulmonary transplantation. Requires strong background in cardiovascular physiology and experience with small and large animals. Inquiries with curriculum vitae and name of three references to: **Chairman, Department of Surgery, University of Louisville, Louisville, KY 40292. An Affirmative Action/Equal Opportunity Employer. Cut off date is 4 October 1991.**

## POSITIONS OPEN

**RESEARCH ASSOCIATE** for State University in northwestern Ohio. Complex research pertaining to three-dimensional real part synthesis via stereolithography from photoinitiators and photosensitive monomers; and design and synthesis of new photoinitiators for visible wavelength laser photoinitiators; and performs design synthesis structure elucidation and evaluation of photochemical reactions utilizing the following research techniques: Fourier transform/nuclear magnetic resonance spectrum (FT/NMR), Fourier transform/infrared spectrum (FT/IR), ultraviolet spectrum (UV), gas chromatography/mass spectrum (GC/MS), gas-liquid chromatography (GLC), and thin-layer chromatography (TLC). Ph.D. in synthetic organic chemistry required. Doctoral dissertation to pertain to the synthesis or complicated polycyclic and heterocyclic products utilizing the research techniques specified in the job duties. Forty hours per week, 8:00 a.m. to 5:00 p.m., Monday to Friday; \$22,600 per year. *Must have proof of legal authority to work permanently in the United States.* Send résumé in duplicate (no calls) to: **S. Holton, JO# 1282069, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

Private university in northeastern Ohio seeking technician, **RESEARCH ASSISTANT II** to assist in research project investigating genetic changes in childhood tumors. Will process human tumor samples, and assist in categorization. Must be willing to work with hazardous chemicals, radioactive materials, and pathogenic substances. Coursework in medical sciences required, particularly histology, pathology, and pediatrics, with knowledge of medical terminology related to pediatric tumors. Salary: \$21,356 per annum, 37.5 hours per week, 8:30 a.m. to 5:00 p.m., Monday through Friday. Position requires bachelor's degree in medical science with 2 years of experience in immunoprecipitation and protein electrophoresis, deoxyribonucleic acid purification, enzyme-linked immunosorbent assays, and immunization of laboratory animals and maintenance of tissue culture facility, including hybridoma cultivation, or master's degree in medical science, no experience required. *Must have proof of legal authority to work permanently in the United States.* Send curriculum vitae with list of publications, names of two recent professional references and copies of academic transcripts documenting required coursework, in duplicate (no calls), to: **G. Maugans, J.O. #1255772, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

**OPTOELECTRONIC SYSTEMS ENGINEERING SCIENTIST.** Will perform research in the field of optoelectronics on hybrid combinations of optical and electronic systems through white light interferometers that are being devised for the vision portions of robots. Will be responsible for devising novel system concepts and for developing the basic theory and experiments in order to demonstrate or prove these concepts. Will work on the development of compact vision systems that operate in real time combining the most up-to-date developments in both optical and digital APR research. Must possess a Ph.D. in optoelectronics sciences. Must have 3 years of experience in the job offered or 3 years of experience as optical design engineer. Must possess proven research ability in the field of optical systems as evidenced by research publications in refereed journals. Must be able to use neural network software. Five-day, 40-hour week, \$48,000 per year. Apply with résumé to: **New York State Department of Labor, 140 West Main Street, Rochester, NY 14614, Attention: P. Shaughnessy. Refer to: NY0502702. Equal Opportunity Employer, M/F.**

University of Wisconsin-Madison. The Department of Psychiatry is seeking an experienced **PSYCHIATRIST** for an academically oriented tenure-track position in the area of geropsychiatry. Individual would be expected to establish an independent research program involving either basic or clinical research and would be important in the organization and ongoing development of the Division of Geropsychiatry. Candidate will be involved in the teaching of residents and medical students and expected to obtain outside grant support for his/her research. Send curriculum vitae and cover letter to: **Dr. Ned Kalin, Chairman, Department of Psychiatry—D6/249B, University of Wisconsin Medical School, 600 Highland Avenue, Madison, WI 53792. The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.**





A dynamic young company is seeking chemists and a pharmacologist to join our drug discovery and development efforts.

**Senior Chemist (Ph.D. 3+ yrs.):** Medicinal/synthetic organic chemist with experience in synthesis of novel compounds, HPLC, NMR, MS required. Fluorescence, protein and peptide chemistry a plus. Successful candidate will interact with pharmacology department.

**Three Technical Positions: (BS or MS 1+ yrs.): First and Second positions:** Technical support for the chemistry program described above. Experience in drug synthesis, HPLC, NMR, and MS required. Second position also requires protein/peptide chemistry experience.

**Third position:** Perform biochemical and pharmacological receptor binding studies. HPLC, spectrofluorimetry, autoradiography and behavioral experience a plus.

Company located in Southern Westchester County, New York. Salary commensurate with experience, attractive benefit program. Please send *resume* to:

**Pharmaceutical Discovery Corporation**  
7 Westchester Plaza  
Elmsford, NY 10523



## Director of Animal Resources University of Florida

The University of Florida invites applications and nominations for a tenured position as Director of the University of Florida campus-wide program in laboratory animal resources. Letters of application or nomination should include curriculum vitae outlining academic training, teaching, administrative and present professional activities. The application should include a list of publications, statement of professional goals and names of 3 or more persons who can provide letters of reference.

Academic rank and salary will be commensurate with training and experience of the successful candidate. The Director of Animal Resources serves as the University of Florida attending veterinarian. The Director shall:

- I. Direct the operation of the laboratory animal care program for the University in accordance with AAALAC standards for accreditation.
- II. Insure the provision of adequate veterinary care for all University-owned animals as required by federal regulations and guidelines.
- III. Advise the University administration on all matters affecting compliance with the regulations implementing the Animal Welfare Act, the Public Health Service Policy, the NIH Guide for the Care and Use of Laboratory Animals, and any state or local ordinances.
- IV. Serve as a member of the Institutional Animal Care and Use Committee with the additional responsibility of advising the Committee on the interpretation and application of federal regulations, standards and guidelines.
- V. Assure the implementation and maintenance of current animal care technology most conducive to excellent research within reasonable costs and with minimal administrative impediment.
- VI. Develop and direct academic training programs in laboratory animal medicine and science. This includes residency training for graduate veterinarians leading to board certification, basic and clinical instruction for undergraduate veterinary students, graduate programs in collaboration with appropriate academic departments, instruction of research faculty and staff, and programs for animal caretakers leading to AALAS technician certification.

Qualifications for the position include a DVM or equivalent degree and board certification in the American College of Laboratory Animal Medicine. A doctoral degree (Ph.D. or equivalent) is preferred. An established record of excellence in veterinary, graduate or postdoctoral training is required. A commitment to excellence in academic service programs is essential.

Applicants or nominees should be eligible for appointment to tenure rank and membership in the Graduate Doctoral Research Faculty of the University of Florida. A detailed duties job description is available upon request.

Application deadline is November 15, 1991.  
Contact: **Dr. Richard E. Dierks, Search Committee Chairperson,**  
College of Veterinary Medicine, University of Florida,  
P.O. Box 100125, Gainesville, FL 32610-0125.

*The University of Florida is an affirmative action/equal opportunity employer.*

## Research Fellowships

Two postdoctoral positions are available to pursue basic research projects in vascular cell biology in the Department of Health Sciences, Monsanto Corporate Research. A strong molecular biology background is preferred.

The laboratories in Health Sciences offer a unique postdoctoral opportunity that combines an academic atmosphere within an industrial setting. Research in this department is multi-disciplinary, with emphasis on the control of vascular diseases such as atherosclerosis through the use of state-of-the-art molecular biology, cell biology, and biochemistry. Publication is expected (for example, see *Science* 246, 1309-1312). Collaboration with experts throughout Monsanto and local universities is encouraged.

Monsanto Company makes/markets high value chemical and agricultural products, pharmaceuticals, low-calorie sweeteners, fat substitutes, industrial process equipment, man-made fibers, plastics and other performance materials. Please send C.V., letter of research interests and the names of three references to: **Ms. Tammy Skelton; Supervisor, Human Resources; Monsanto Company; Mail Zone 02H; 800 N. Lindbergh Blvd.; St. Louis, MO 63167.** Monsanto Company is an Equal Opportunity Employer M/F/H/V.

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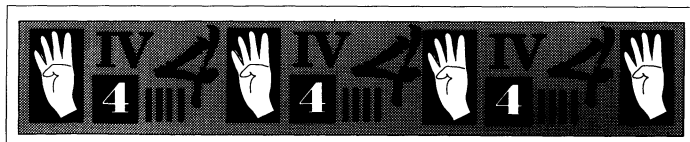
Baxter Diagnostics Inc., a leader in supplying diagnostic reagents, is undertaking an expansion in the clinical laboratory controls group. We currently have an opportunity to join us in this research and development position.

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We offer an excellent scientific environment supported by a highly competitive salary and complete benefits package. Please send your resume in confidence to: **Baxter Diagnostics Inc., Research and Development MS 384, P.O. Box 520672, Miami, FL 33152-0672.** Equal Opportunity Employer. We Conduct Pre-Employment Drug Screening.

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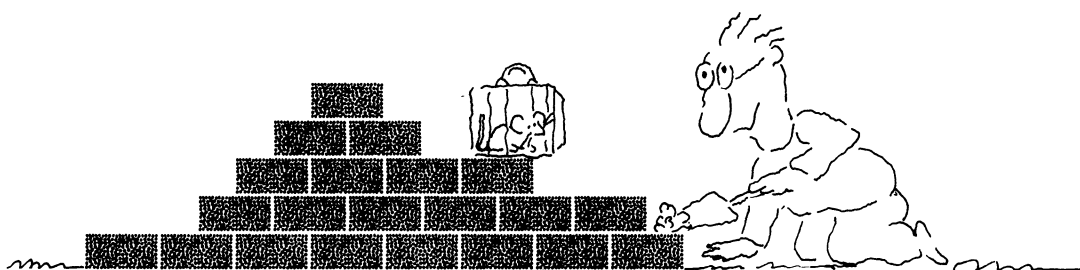
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## SYSTEM CHEMISTRY

Working closely with our system development team, you'll validate instrument subsystems, optimize factors affecting assay performance, and test prototype instrumentation. We require an MS or PhD in Bioengineering, Physical, Analytical, or Biophysical Chemistry, and 1-4+ years in the development of medical diagnostic equipment. Experience with fluidic systems, optics temperature control, robotics, and/or computers (particularly MS-DOS) is preferred. **Job #40295.**

## SYSTEM SUPPORT

Responsible for training Assay Chemists on prototype instrument and software operation, you'll also troubleshoot chemistry/hardware/software problems, track system performance, prepare operation manuals, and work closely with our system development team. We require a BS/MS in Biochemistry or Biophysical Chemistry, and 2-4+ years in immunoassay development for automated systems. We prefer instrument development experience and knowledge of MS-DOS. **Job #40273.**

Abbott offers a competitive compensation and benefit package, including profit sharing and a stock retirement plan. We are located in an attractive suburban setting just 30 miles north of Chicago. For consideration, please send a resume to: **Ann Ribbens, Corporate Placement, Abbott Laboratories, One Abbott Park Rd., Abbott Park, IL 60064.** (To facilitate the handling of your resume, please indicate the appropriate Job # on your resume or cover letter). Abbott is an Affirmative Action Employer/Smoke-Free Environment.

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### RESEARCH — PALO ALTO, CALIFORNIA

**Biophysicist/Biochemist** Investigate the role of changes in protein conformation on the binding of peptide ligands by MHC class II proteins, in order to characterize the different conformers, and understand the factors involved in their interconversion.

**Requirements:** Ph.D. in Biophysics, Biochemistry or Chemistry, and at least 2 years' relevant postdoctoral training, with experience in protein chemistry. A background in computer-assisted molecular modeling is highly desirable.

**Organic Chemist** Investigate the structural requirements for MHC class II-antigen binding via the design and synthesis of peptides and peptidomimetics.

**Requirements:** We prefer a Ph.D. in Organic Chemistry with a strong record of achievement, but we're open to a wide range of backgrounds and qualifications. Experience with computer-assisted molecular modeling and medicinal chemistry techniques is desirable.

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### Assistant Research Director

The Assistant Research Director will manage and provide scientific leadership for the Diagnostic Imaging Discovery Safety section, a newly formed group being assembled to design and coordinate the toxicologic evaluation of diagnostic imaging agents (magnetic resonance, X-ray, etc.). The individual will also participate as a member of Discovery Imaging project teams, initiate and monitor contracted studies and serve as Study Director. This position will have responsibility for developing the research programs to assess particulate toxicology, reticuloendothelial system distribution and immunogenicity effects critical to the development of several discovery imaging compounds.

A Ph.D. or D.V.M. and comprehensive knowledge of general toxicology is required. Demonstrated expertise/scientific leadership in investigative immunotoxicology and toxicologic evaluation of diagnostic imaging agents is desirable. The position requires at least 7 years of pertinent laboratory experience beyond the advanced degree and 2 years' experience in a research managerial position. Position code RS-61-91.

### Research Investigator, Toxicology

The Research Investigator will report to the Assistant Research Director and will participate on Discovery Imaging project teams regarding toxicologic evaluation of new agents and serve as Study Director. The individual will also have the opportunity to conduct investigative toxicologic studies in support of imaging agents and particulate substances.

A Ph.D. or D.V.M. in toxicology or related discipline plus postdoctoral research experience are required. Expertise in the toxicology of imaging agents and particulate substances is desirable. Position code RS-68-91.

*You will discover that we offer a competitive salary and benefits package along with outstanding career opportunities. Sterling Research Group will be relocating to Upper Providence Township, Pennsylvania, in approximately 1993, and invites you to share in the opportunities now and in the future. Please send resume to: Sterling Research Group, 81 Columbia Turnpike, Rensselaer, New York 12144. An Equal Opportunity Employer M/F/D/V.*



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## POSTDOCTORAL FELLOW IN MOLECULAR TOXICOLOGY

University of Pittsburgh

The Department of Environmental and Occupational Health in the University of Pittsburgh's Graduate School of Public Health is seeking a postdoctoral fellow with experience in molecular biology and/or cell culture to study genetic changes in human cells and in humans. Our current research involves development and application of new technology to study the biochemical mechanisms of environmental carcinogens in human cells. Position is available October 1, 1991. Send curriculum vitae and names of references to:

**Dr. P. Keohavong, Department of Environmental and Occupational Health, Graduate School of Public Health, University of Pittsburgh, 130 DeSoto Street, Pittsburgh, PA 15261.**

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## Geisinger Clinic

### Associate Scientist/ Postdoctoral Fellow

Position available immediately for an associate scientist (3 years postdoctoral experience) or postdoctoral fellow to study the expression, activation, and function of protein kinase C and/or  $Ca^{2+}$ /calmodulin-dependent kinase II isozymes in vascular smooth muscle. Requires a Ph.D. in biochemistry, cell biology or a related field. Prior experience in protein kinase biochemistry and/or molecular biology would be advantageous. Competitive salary and fringe benefits are available. Please send curriculum vitae and two letters of reference to: **Dr. Harold Singer, Weis Center for Research, Geisinger Clinic 26-12, Danville, PA 17822.** Equal Opportunity Employer M/F/H/V.

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## POSITIONS OPEN

### ECOLOGIST

Argonne National Laboratory has an opening for an ecologist to conduct environmental assessments and research pertinent to a variety of energy-related projects. Experience or training at either the population, community, or ecosystem level of organization is acceptable. A Ph.D. in terrestrial or aquatic ecology is required. Strong writing, computational, and statistical skills are also necessary. We offer an excellent salary commensurate with your background, as well as a comprehensive benefits plan. For prompt consideration, send a detailed résumé, the names and addresses of three references, and a statement of research interests, by 15 October 1991, to: **Susan Walker, Box J-EID-94219-55, Employment and Placement, Argonne National Laboratory, 9700 South Cass Avenue, Argonne, IL 60439.** Argonne is an Equal Opportunity/Affirmative action Employer.

**MICROBIOLOGIST/MODELER.** ASCL Corporation is seeking microbiologist/modeler to develop conceptual models of bacterial degradation of spilled oil and assist in experimental and process design for bioremediation of PAH- and PCB-contaminated sediments. Doctoral degree in microbiology or civil/environmental engineering is preferred and ability to formulate mathematical models for microbial processes and integrate experimental results. Send letter of interest and curriculum vitae to: **Ms. Desiree Hassan, ASCL Corporation, 987 Gaines School Road, Athens, GA 30605.**

### RESEARCH ENTOMOLOGIST/MYCOLOGIST FUNGAL PATHOGENS OF ARTHROPODS UNITED STATES DEPARTMENT OF AGRICULTURE AGRICULTURAL RESEARCH SERVICE (USDA/ARS) NORTH ATLANTIC AREA— ITHACA, NEW YORK

The USDA/ARS Plant Protection Research Unit is seeking an individual to join a group focusing on the development of fungal pathogens for biological control of arthropods. The successful applicant will conduct research on biotic and abiotic factors affecting infection, host specificity, host resistance, disease development, and host mortality by fungal entomopathogens as part of a research team developing microbial biocontrols. Requirements include a Ph.D. or equivalent professional experience with skills in organismal, developmental biology, molecular and biochemical aspects of invertebrate pathology, mycology and/or entomology. Salary is commensurate with experience, GS/M 12-14 (\$37,294 to \$52,406). For further information, contact: **Dr. Donna Gibson, 607-255-0271, or Dr. Richard Humber, 607-255-1276.** For information on application procedures and forms, contact: **Amy Hegarty, 301-344-1851, by 18 October 1991.** Applications should be marked 1N070 and must be received by 1 November 1991. ARS is an Equal Opportunity Employer. Women and minorities are encouraged to apply.

**BIOMEDICAL RESEARCH ASSOCIATE.** Design and implement experiments on receptors of various hormone peptides affecting animals and humans; perform emulsion assays, cross-linking experiments and autoradiography; Northern blots; Scatchard analysis; perform histological techniques; statistical analysis to produce reports setting forth experimental results, and comments on their significance. Required: M.D. or Ph.D. in physiology; expertise in: computerized image analysis of tissue sections, autoradiography, experiment design, small animal surgery, specimen collection and preservation, tissue cryo-sectioning, emulsion assays, cross-linking, Scatchard analysis, histological techniques, report-production. Salary: \$29,000 per year; 40 hours per week, 9:00 a.m. to 5:00 p.m. To apply: mail two copies of résumé with a copy of ad attached or with **J.O. #9570** to: **DOES, 500 C Street, N.W. Room 325, Washington, DC 20001.** Telephone: 202-724-3770. Proof of legal right to work in the United States must be provided.

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## POSITIONS OPEN

**BIOMEDICAL RESEARCH ENGINEER** for institution in northeastern Ohio. To conduct clinical research involving data analysis, medical imaging processing, and design of algorithms and parameters for the measurement and detection of the distribution of retinal vasculature. Also involves research and development of the equipment and techniques for recording, displaying, storing, and processing physiological signals including medical signals filtering, Fast Fourier Transform, interpolation, imaging enhancement, computer graphics, 3D and other medical imaging processing techniques. Must have B.S. in biomedical engineering and academic program must have included one course each in: biomedical image analysis, physiological process, biostatistical methods, filtering in biomedical engineering, computer graphics, biomedical instrumentation, general medicine, and software engineering. Must have the ability, as evidenced by academic coursework, publications, employer testimonials, and/or academic letters of reference, to design medical software for research purposes. Must have 6 months of experience as research assistant and research must have been in biomedical engineering (experience may be gained before, during, or after degree). Forty hours per week, 8:30 a.m. to 5:30 p.m., \$30,000 per year. Must have proof of legal authority to work permanently in the United States. Send résumé and course transcript in duplicate (no calls) to: **J. Davies, JO# 1255786, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

### FISHERY BIOLOGIST/FISH ECOLOGIST

The South Florida Research Center (SFRC), a research and resource management organization within Everglades National Park seeks applicants for a fishery ecologist position. SFRC staff conduct research on the hydrology, wildlife biology, vegetation dynamics and marine ecology of the Everglades ecosystem. This is a permanent research grade evaluation position; salary will be commensurate with professional standing. The applicant should have an advanced degree in fishery science and/or fish ecology with demonstrated interest and academic scholarship in specialty area. The incumbent will direct an ongoing gamefish-harvest monitoring project and be expected to develop a strong program of research into the ecology of marine fishes in the park.

For information applicants should contact: **Dr. Michael Robblee, South Florida Research Center, P.O. Box 279, Homestead, FL 33030, or telephone at 305-242-7824.** An Equal Opportunity/Affirmative Action Employer. Women and minority candidates are encouraged to apply.

**MOLECULAR BIOLOGIST.** Position available in Dr. Stuart Smith's laboratory to identify regulatory mechanisms involved in modulating expression of the fatty acid synthase gene in response to dietary, developmental and hormonal stimuli [see *Biochem. J.* 271, 676 (1990)]. Experience in area of gene transcription necessary. Ph.D. required. Submit résumé to: **Children's Hospital Oakland, Personnel Department, 747 52nd Street, Oakland, CA 94609.** Equal Opportunity Employer.

### SOLID-STATE DEVICE PHYSICIST

Supervise the design and construction of apparatus for characterization and testing of solid-state image sensors. This equipment utilizes both analog and digital electronics as well as optical, mechanical and cryogenic components, and is controlled by computer for automated data acquisition and analysis. Perform the characterization and testing of these image sensors which involves design of experiments and analysis of the data requiring device modeling and stimulation. Provide information to users of the devices, the design community and device fabrication engineers. The position requires a Ph.D. degree in solid-state physics with 4 years of experience in job offered or as a condensed matter physics physicist. The 4 years of experience must include: 4 years in optics, high vacuum and cryogenic experimental techniques, 4 years of experience in computer and controlled data acquisition, modeling and analysis. Also must have working knowledge of digital and analog electronics and 2 years in optical techniques and 1 year of experience in ellipsometry. This experience can be obtained concurrently and during graduate study. Salary: \$53,000 per year. Send résumé to: **P. Shaughnessy, Job Service, 140 West Main Street, Rochester, NY 14614.** Refer to: NY0500950.



## POSITIONS OPEN

### BIOSTATISTICIAN

To develop statistical techniques for analysis of Human Event Related Brain Potential including dipole localization and topographic analyses. A Ph.D. is required for faculty appointment. Knowledge of nonlinear optimization techniques as well as UNIX quite essential. Send résumé to:

Dr. Henri Begleiter  
SUNY Health Science Center  
Neurodynamics Laboratory  
450 Clarkson Avenue, Box 1203  
Brooklyn, NY 11203

**MOLECULAR BIOLOGIST.** We are looking for an individual with experience in molecular biology techniques including in situ hybridization, Northern blotting and PCR. The research involves demonstration of the role of cytokines (IFN- $\gamma$ , IL-1, IL-6, TNF- $\alpha$ ) and steroids in human endometrium. Please call Dr. Tabibzadeh at 813-979-7237 or write to: S. Tabibzadeh, M.D., Department of Pathology, Moffitt Cancer Center at the University of South Florida, Tampa, FL 33612.

### SOMATIX THERAPY CORPORATION

Somatix Therapy Corporation is a leading biotechnology company utilizing gene transfer and cellular transplantation technologies to develop cell-based protein delivery systems for human therapeutics. Positions are available immediately for highly motivated and qualified individuals.

**RESEARCH SCIENTIST (MOLECULAR BIOLOGY):** Candidates should have experience with gene expression in mammalian cells. Ph.D. plus postdoctoral experience required.

**RESEARCH SCIENTIST (CELL BIOLOGY):** Position requires experience studying the role of extracellular matrices, cell-cell interactions and/or cell adhesion molecules in mammalian cell growth and differentiation. Ph.D. plus postdoctoral experience required.

We offer a competitive salary and compensation package. Please submit curriculum vitae to: Department #31, Somatix Therapy Corporation, 850 Marina Village Parkway, Alameda, CA 94501. *Equal Opportunity Employer.*

### SENIOR LEVEL POSITION DEPARTMENT OF MOLECULAR BIOLOGY PRINCETON UNIVERSITY

The Department of Molecular Biology at Princeton University invites applications for a senior position in immunology, neurobiology, or biochemistry. Applicants should send curriculum vitae, a summary of research interests, and the names of at least three references to:

Molecular Biology Search Committee  
Department of Molecular Biology  
Princeton University  
Princeton, NJ 08544

Application deadline is 1 December 1991. *Princeton University is an Equal Opportunity/Affirmative Action Employer.*

**SENIOR RESEARCH ASSOCIATE,** Department of Pathology, for private university in northeastern Ohio. Design, execution and interpretation of biochemical experiments to elucidate the role of the Maillard reaction in the pathogenesis of cataracts in animal and human lenses. Utilizing analytical techniques including protein isolation and purification, electrophoresis, immunoblotting, enzyme-linked immunoassay, gel filtration, ion exchange, high-performance liquid (HPLC) and paper chromatography and amino acid analysis; interpretation of absorption, fluorescence, nuclear magnetic resonance (NMR) and mass spectra. Ph.D. in biochemistry or protein chemistry and 3 years of experience in Maillard reaction and protein chemistry is required. Salary is \$25,860 per annum; 37 1/2 hours per week (8:30 a.m. to 5:00 p.m., Monday to Friday). *Must have proof of legal authority to work permanently in the United States.* Send curriculum vitae with list of publications, names of three recent academic or professional references and five reprints of peer-reviewed publications in the past 5 years in duplicate (no calls) to: S. Holton, J.O. #1255770, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216. *Affirmative Action/Equal Employment Opportunity.*

20 SEPTEMBER 1991

## RESEARCH OPPORTUNITIES MICROBIAL PHYSIOLOGY AND BIOCHEMISTRY

**Amgen** is an innovative leader in the development of human therapeutic products through applications of biotechnology. As a result of our continued growth, we have an immediate opportunity for an individual in our Applied Microbiology and Molecular Genetics Group to contribute to the development of fermentation technology and host strain development.

Qualified candidates must have an MS and a minimum of two years' relevant experience or a PhD in an appropriate discipline. Experience in microbial physiology and genetics, including fermentation, host strain and vector development, is essential. Experience in the biotechnology industry is preferred.

**Amgen** offers a stimulating and challenging research environment where scientists are given the resources and encouragement necessary to achieve success. Our compensation and benefits programs reflect our commitment to attract and retain the best scientific talent available. Qualified candidates should send a complete CV, in confidence, to:

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## VIROLOGY RESEARCH OPPORTUNITIES

Research associates will participate in virology research programs emphasizing either in vitro assay development or in vivo model development for the discovery of agents effective in the treatment of human viral diseases. Qualified candidates must have a bachelor's or master's degree and several years experience in virology, which may include HIV and/or other viruses.

Successful candidates should have either:

- a strong background in molecular virology, cell culture, molecular biology, and in vitro virology and experience with immunological assays, biochemical and genetic techniques, or
- a good foundation in cell culture, viral propagation and assay methods with experience in evaluating antiviral agents using PCR, molecular virology, immunological and animal handling techniques.

The Upjohn Company is located in Kalamazoo, Michigan, a medium-sized university city, midway between Chicago and Detroit, offering varied cultural events, reasonable housing costs and numerous lakes and recreational advantages. For confidential consideration please send your cover letter and resume to: THE UPJOHN COMPANY, POSITION CODE 910563-073, 7000 PORTAGE ROAD, KALAMAZOO, MI 49001. An Equal Opportunity Employer M/F.

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National Institutes of Health

## Post-Doctoral Positions in Molecular Biology

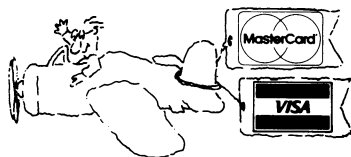
Two positions are available for recent Ph.D. graduates in the Section on Genomic Structure and Function, Laboratory of Biological Pharmacology, NIDDK, NIH in Bethesda, MD. One is to study the effects of triple-stranded DNA and other abnormal DNA structures *in vivo* (Dr. K. Usdin). The other is for the study of L1 elements, a group of highly repeated mobile genetic elements that are ubiquitous in mammals (Dr. A.V. Furano). Topics currently under investigation are the genetic effects, evolution and replication of these elements.

A strong background in molecular biology is required and experience with tissue culture techniques is desirable but not essential. Applicants should submit their Curriculum Vitae and three letters of reference to:

**Anthony V. Furano, M.D. or  
Karen Usdin, Ph.D.**  
National Institutes  
of Health  
Building 8, Room 203  
9000 Rockville Pike  
Bethesda, MD 20892



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## POSITIONS OPEN

### THE UNIVERSITY OF WISCONSIN

**Escherichia coli** GENOME SEQUENCING PROJECT has openings for: scientist, postdoc, manager, programmer, technician with expertise in molecular biology, sequencing, biocomputing or informatics.

Submit letter of application and curriculum vitae to:  
**Frederick Blattner, Laboratory of Genetics, 445 Henry Mall, Madison, WI 53706.**

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

**SENIOR RESEARCH SCIENTIST** sought by medical research firm in southwestern Ohio. Direct and perform research on identification and isolation of biologic factors in avian (poultry) eggs using chemical (supercritical carbon dioxide and organic extraction techniques), biochemical (gel electrophoresis, immobilized metal-chelate, affinity chromatography and column and high-performance liquid chromatography) and immunological (enzyme-linked immunosorbent assay and Western and dot blotting) techniques, methodologies and equipment; analyze impact of such biologic factors on human and animal bodily processes and functions; based on research, develop pharmaceutical and food compounds to control human and animal diseases; supervise and direct assistant researchers. Experience: 3 years of experience in job described or 3 years of experience in independent research and analysis in food biochemistry, including 1 year of experience in separation and purification of bioactive molecules from eggs using ion exchange, metal-chelate, affinity chromatography and immuno assay and 1 year of experience utilizing electrophoresis and chromatography equipment. Education: Ph.D. in agriculture or biochemistry. Salary: \$38,000 per year; 8:00 to 5:00, 40 hours per week, Monday to Friday. *Must have proof of legal authority to work permanently in the United States.* Send résumé in duplicate (no calls) to: **S. Holton, JO# 1227107, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

**SENIOR SCIENTIST I**/Palo Alto, California, in company involved in research of crop protection methods. Will develop scientific programs in area of peptide biochemistry for crop protection without use of pesticides; will work to achieve identification of specific prohormones and processing mechanisms using a variety of biochemical and molecular techniques including HPLC, cDNA/genomic library construction, DNA sequencing, protein isolation, enzymology and enzyme inhibition; will supervise one junior scientist. Must possess Ph.D. in biochemistry or related field; minimum experience must include at least 1 year in job offered or 2 years in advance research position in protein biochemistry; must also possess experience in plant biochemistry. Forty plus hours per week. Salary: \$43,000 per year. *Must have proof of legal authority to work in the United States.* Send this ad and your résumé to: **Job# DN 8228, P.O. Box 9570, Sacramento, CA 95823-0570** no later than 7 October 1991.

## MEETINGS

### JUSTICE AND THE HUMAN GENOME 8 TO 9 NOVEMBER 1991 SWISSOTEL, CHICAGO

Sponsored by the University of Illinois at Chicago College of Medicine and U.S. Department of Energy, this forum addresses social, legal and ethical considerations involved in the acquisition and dissemination of human genetic information. For further information contact: **Sue Talbert, University of Illinois at Chicago, Office of Conferences and Institutes (M/C 607), Box 6998, Chicago, IL 60680. Telephone: 312-996-4631.**

### 4TH INTERNATIONAL TNF CONGRESS 2 TO 6 MAY 1992 CONGRESS CENTER "KONINGSHOF" EINDHOVEN, THE NETHERLANDS

For further information, please contact:  
**Secretariat 4th International TNF Congress  
Department of Surgery  
University of Limburg, B.M.C.  
P.O. Box 616, 6200 MD Maastricht  
The Netherlands  
FAX: +31-43-437599**

## POSITIONS OPEN

### SENIOR RESEARCH CHEMIST

Seeking a senior research chemist to do research and develop drug metabolism and neurophysiological chemicals. Develop new products dealing with the cause and treatment of disorders such as Alzheimer's and Parkinson's diseases, drug addiction, and basic brain research. Must be able to synthesize chemical compounds relevant to the field of psychopharmacology and develop new methods for the synthesis of new compounds. Will collaborate with other chemists to write applications for research and development grants and contracts from both the U.S. government and private industry. Will participate in maintaining and expanding existing laboratory safety program. A Ph.D. in organic chemistry is required. The Ph.D. thesis should be in the area of organic chemistry, developing a new methodology using organometallic chemistry for organic synthesis. Four years of experience using NMR spectroscopic techniques, FT-IR and GC/MS. One year's direct experience in the job offered or 9 months in the related field as a research associate in total organic synthesis is required. This is a full-time position (40 hours per week, 9:00 a.m. to 5:00 p.m., Monday to Friday) with an annual salary of \$42,000. Applicants should submit two copies of applicant's résumé. Please send résumé to: **Job Order #1863, P.O. Box #8968, Boston, MA 02114.**

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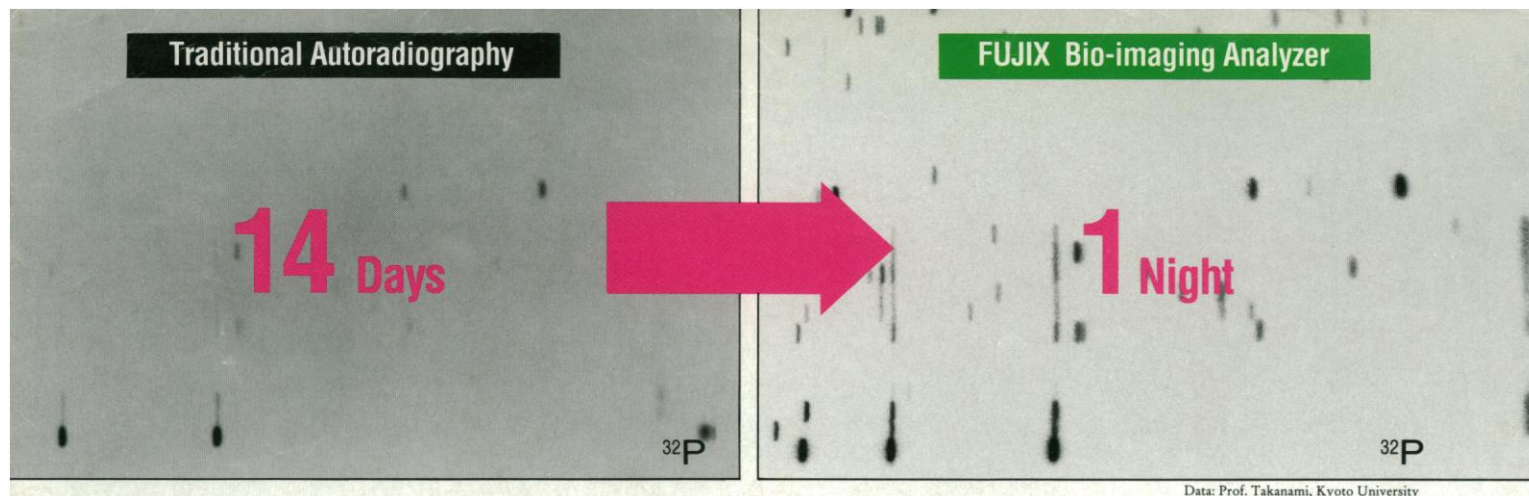
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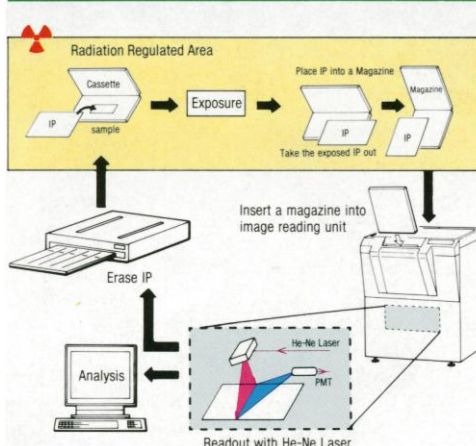
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## The Reusable Imaging Plate (IP)



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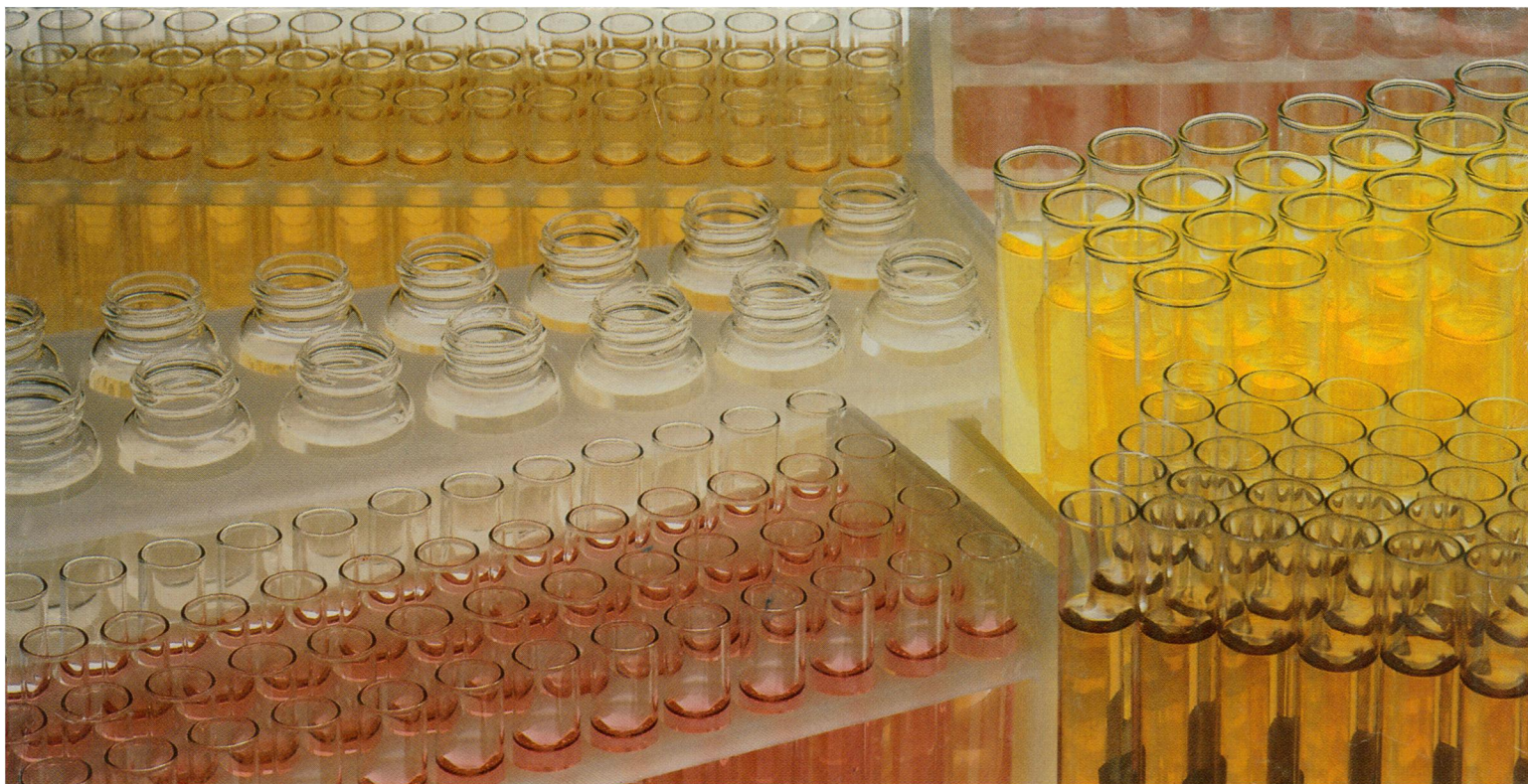
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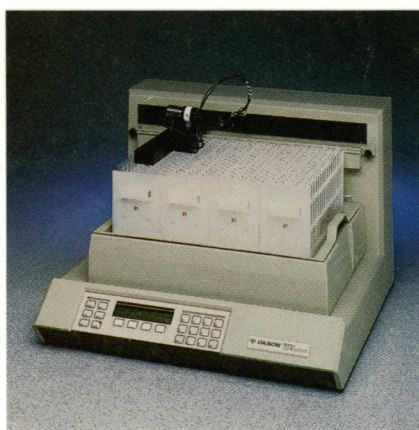
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**New FC 204 high-capacity, high-volume fraction collector.**

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