

## Products & Materials

### ***Current Contents on Diskette***

*Current Contents on Diskette with Abstracts* is now available in four multidisciplinary editions: life science; agriculture, biology, and environmental sciences; physical, chemical, and earth sciences; and clinical medicine. (The Institute for Scientific Information will continue to publish *Current Contents on Diskette*, which does not include abstracts, in seven editions.) It is available on 3 1/2-inch and 5 1/4-inch high-density disks for IBM-compatible computers and 3 1/2-inch high-density disks for Macintosh computers. Institute for Scientific Information. Circle 507.

### ***Taq DNA Polymerase***

Taq DNA Polymerase is extensively purified to be free from contaminating endonucleases, exonucleases, and DNA fragments. When 0.5 µg of the preparation is analyzed in a silver-stained sodium dodecyl sulfate-polyacrylamide gel electrophoresis procedure, a single 94-kD band is observed. Under reaction conditions, the diluted enzyme is resistant to prolonged incubation at 95°C. Boehringer Mannheim Biochemicals. Circle 508.

### ***Reverse Transcription in a Single Tube***

The GeneAmp Thermostable *rTth* Reverse Transcriptase RNA PCR Kit contains all the components necessary to reverse transcribe RNA to cDNA and subsequently amplify cDNA in a single reaction tube using the same enzyme. The kit facilitates reverse transcription of RNA templates at elevated temperatures and through regions that are G+C-rich or contain complex secondary structures. The kit makes use of the recombinant *Thermus thermophilus* (*rTth*) DNA polymerase as both a thermostable

reverse transcriptase and a thermostable DNA polymerase in successive reactions under different conditions. The kit significantly expands the range of templates to which RNA polymerase chain reaction can be applied. Perkin-Elmer Cetus Instruments. Circle 509.

### ***Talking Gel Reader***

DNA Parrot is a gel reader that allows the user to read the sequence to the computer or push buttons on the cursor for data entry into Macintosh or IBM-compatible computers. The system features human voice and lights for feedback during data entry and proofreading, eliminating the need to look at the screen. The DNA Parrot is a serial port cursor device with four buttons for sequence data entry and one for deletion of the last entry. Each button has a light-emitting diode for visual feedback. Sequence information is entered by moving the cursor upward on the gel and pressing the buttons or reading the sequence into a microphone. T&t Research. Circle 510.

### ***Periodic Table Database***

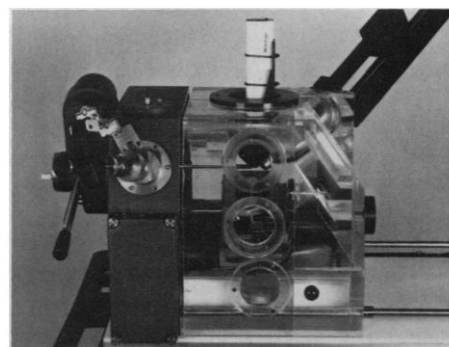
Proelement is a periodic table database and management system that contains more than 12,000 data entries, including physical, isotropic, electronic, chemical, spectral, nuclear, bonding, and nuclear magnetic resonance properties of 103 elements and 481 isotopes. Proelement is IBM PC- and PS-2 DOS-compatible. It requires 640 K random access memory and a hard drive. Intelibase Engineering Software. Circle 511.

### ***Portable Dew Point Generator***

The LI-610 Portable Dew Point Generator is a rugged, portable instrument that provides a stream of air with a precisely controlled dew point. Accurate and stable enough for lab use, the portability of the unit can add a new dimension to field calibrations of humidity sensors, gas analyzers, and dew point hygrometers. LI-COR. Circle 512.

### ***Vacuum Scopes***

Rigid vacuum scopes capable of withstanding vacuums as low as  $10^{-6}$  torrs can help users of scanning electron microscopes see a sample more clearly and position it more accurately on the sample stage. The



scopes have gimballed access ports to allow freedom of motion within the chamber. Olympus. Circle 513.

### ***Automatic Direct Blotting System***

The AutoTrans 700 performs rapid and continuous electrophoretic separation and transfer of nucleic acids and proteins to membranes. The system makes use of a single hardware configuration with a range of application-specific combinations of operating programs and electrophoresis reagents. The system has a wide variety of uses such as dideoxy or multiple DNA sequencing, genetic or physical mapping studies, or preparation of protein immunoblots or DNA blots. Nucleic acid or protein samples are loaded on a short vertical acrylamide or agarose gel. As the molecules separate and elute from the bottom of the gel, the patented moving web system advances the transfer membrane across the gel surface and binds the eluted molecules. Betagen. Circle 514.

### ***Literature***

*Reflected Light Microscopy—An Overview* addresses subjects including upright and inverted metallurgical microscopes; vertical universal illuminators and light sources; Koehler, dark-field reflected, polarized reflected, and other illumination techniques; infinity-corrected objectives; measurements; photomicrography; video; specimens and their preparation; and more. Olympus Corporation. Circle 515.

*HPLC. Systems for Solutions* is a 16-page brochure that provides a detailed overview of liquid chromatography systems, including those configured for special applications such as a peptide mapping system, a high-performance liquid chromatography system for polymerase chain reaction analysis, a carbamate analysis system, and a gel permeation chromatography system. Perkin-Elmer. Circle 516.

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.

# Personnel Placement

## LINE CLASSIFIED ADVERTISEMENTS

**DEADLINES:** Ads are due by Thursday, 10 a.m., 2 weeks prior to the issue date. *Science* publishes each Friday, except the last Friday of the year. Advertisements must be submitted in writing.

**HOW TO SUBMIT A CLASSIFIED AD:** Prepare double-spaced typewritten ad copy on a separate sheet. Do not include any abbreviations. *Science* will edit and typeset ads according to *Science* guidelines. Deadline for applications stated in ad must be at least 2 weeks after date of publication. Also include a cover sheet which gives name and phone number of contact person, desired date of publication, and billing information, including any special invoicing requests. Mail or FAX materials to:

**SCIENCE Classified Advertising**  
1333 H Street, N.W., Room 940  
Washington, DC 20005  
Telephone: 202-326-6555  
FAX: 202-682-0816

**CLASSIFICATIONS:** *Science* publishes line classified ads under the following headings: **Positions Open, Employment Agencies, Situations Wanted, Courses and Training, Meetings, Announcements, and Marketplace.** Advertisers should specify classification desired.

**HOW TO CALCULATE RATE FOR CLASSIFIED AD:** Ads are \$41 per line with a \$410 minimum. One line equals 52 characters and spaces; centered headings equal 32 characters and spaces.

To ESTIMATE ad cost, count total number of 52 character lines and multiply by \$41 to find approximate cost of ad per week. Each line of centered heading counts as one line. Also count one line for white space between headline and first line of text; all partial lines are also counted as full lines (including all centered reply information).

Remember, this is a rough estimate only. Allow for variation between estimated typewritten lines and ads when actually typeset for magazine. Therefore, purchase orders must allow additional funds for flexibility and/or adjustment. *Science* cannot provide proofs of typeset ads.

**PREPAYMENT DISCOUNT:** A 3% cash discount is granted to all prepaid line ads. Prepayment made in U.S. dollars by checks drawn on U.S. banks is required on all foreign ads.

**CREDIT CARDS:** *Science* accepts MasterCard and VISA. Both personal and corporate cards may be used. Prepayment does not apply to credit cards.

**BOXES AND LOGOS:** Any line classified ad can be boxed and/or published with logo to increase its visibility on page. Since the box takes up additional space, one line now equals 48 characters and spaces; two additional lines will be added to allow for top and bottom rules. Logos are billed according to the number of lines needed to fit logo in space.

**CANCELLATIONS:** Deadline for cancellation is 10 a.m., Tuesday, 10 days prior to issue date.

## DISPLAY PERSONNEL ADVERTISEMENTS

For rates, deadlines, and information about fractional display ads (all ads 1/6 page and larger) and all Marketplace listings of available products and services, contact:

**Scherago Associates**  
1515 Broadway  
New York, NY 10036  
Telephone: 212-730-1050  
FAX: 212-382-3725

**CONDITIONS:** Personnel advertising is accepted only with the understanding that the advertisers do not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference. *Science* reserves the right, at its discretion, to decline to publish advertisements submitted to it and to decline classifications which it considers misleading.

## POSITIONS OPEN

**ASSISTANT PROFESSOR.** An individual is sought to develop an independent, extramurally funded research program in plant molecular genetics. Experience in the area of genome organization, structure and function, with an emphasis on plants of agricultural importance, is desired although other areas of expertise will be considered. Postdoctoral experience and the ability to engage in cooperative research with other faculty and staff is expected. Interactions with other members of the strong plant biology community at Purdue University will be encouraged. The successful candidate will teach a three-credit course annually in the general area of plant genetics, and will contribute to effective graduate and postdoctoral training programs. Direct inquiries, letters of application, curriculum vitae and three letters of recommendation to: **Molecular Genetics Search Committee, Agronomy Department, Purdue University, West Lafayette, IN 47907. Telephone: 317-494-4774.** Applications will be accepted until 31 October 1991, or until the position has been filled. *Purdue University is an Affirmative Action/Equal Opportunity Employer and encourages women and minorities to apply.*

**CELL BIOLOGIST.** Tenure-track ASSISTANT/ASSOCIATE PROFESSOR position to begin 1 January 1992 or 16 August 1992. Both plant and animal cell biologists are encouraged to apply. Establishment of a strong, independent research program, and direction of graduate students is expected. Will instruct a cell biology course and participate in a team-taught introductory biology course. Ph.D. required and postdoctoral experience desirable. Send curriculum vitae, copies of transcripts, three representative reprints and statements of teaching and research interests, and have three letters of recommendation sent directly to: **Dr. L. E. Shubert, Chair, Cell Biology Search Committee, Department of Biology, University of North Dakota, Grand Forks, ND 58202-8238.** Review of applications will begin on 15 September 1991 and continue until the position is filled. *The University of North Dakota is an Affirmative Action/Equal Opportunity Employer.*

## ASSISTANT PROFESSOR SECTION OF GENETICS DUKE UNIVERSITY MEDICAL CENTER

The Section of Genetics at Duke University Medical Center invites applications for tenure-track, junior level faculty positions. Individuals utilizing genetic approaches to address problems in most any important area of biology will be considered. The Section of Genetics is a newly created academic unit that offers a cohesive and interactive research environment as well as an extremely attractive and generous package of research support. Applicants should forward curriculum vitae, a statement of research plans, and the names of three references to: **Dr. Joseph R. Nevins, Section of Genetics, Duke University Medical Center, P.O. Box 3054, Durham, NC 27710.** *Duke University is an Equal Opportunity/Affirmative Action Employer.*

## AQUATIC PLANT ECOLOGIST

**RESEARCH ASSISTANT PROFESSOR.** Position available January 1992. Funding for first 2 years guaranteed as part of a multi-investigator team investigating seagrass/sediment interactions and seagrass/water quality relationships in Chincoteague and Chesapeake Bays. Ph.D. (or equivalent) and research experience in ecological studies of seagrasses, aquatic macrophytes and/or macroalgae is essential. Send curriculum vitae, statement of research interests and names and addresses of three references to: **Aquatic Plant Ecology Search Committee, Horn Point Environmental Laboratory, P.O. Box 775, Cambridge, MD 21613.** Applications received by 15 October 1991 will receive full consideration. *University of Maryland System is an Affirmative Action/Equal Opportunity Employer.*

**THE UNIVERSITY OF WASHINGTON (UW),** Division of Plastic Surgery, seeks a Board-certified M.D. for a full-time faculty position at the rank of ASSISTANT PROFESSOR. Appointment has teaching, patient care and research responsibilities with the main emphasis on micro and hand surgery. Forward current curriculum vitae and bibliography to: **Loren Engrav, M.D., Chief, Division of Plastic Surgery, Department of Surgery, ZA-16, University of Washington, 325 Ninth Avenue, Seattle, WA 98104.** No phone calls. *The UW is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### BIOCHEMISTRY FACULTY POSITION UNIVERSITY OF WISCONSIN—MADISON

Applications are invited for an ASSISTANT PROFESSOR position in the Department of Biochemistry and the Department of Nutritional Sciences of the University of Wisconsin—Madison. Exceptional candidates at the associate professor level will be considered. The successful candidate will be expected to develop a strong research program utilizing modern biochemistry to study nutritional problems. This includes investigators with interests at the organismal and/or cellular level. Duties include teaching the departments' graduate and undergraduate courses and the training of graduate and postdoctorate students. Applications including curriculum vitae, publication list, one-page summary of past accomplishments and a one-page plan of future research should be sent to: **H. F. DeLuca, Chairman, Department of Biochemistry, University of Wisconsin—Madison, 402 Henry Mall, Madison, WI 53706.** Applicants must also arrange for three letters of recommendation to be sent to the same address. To assure consideration, complete applications should be received by 15 October 1991. *The university is an Affirmative Action, Equal Opportunity Employer and encourages women and minorities to apply.*

**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.*

### COMPREHENSIVE CANCER CENTER WAKE FOREST UNIVERSITY

A position is available for ASSISTANT or ASSOCIATE PROFESSOR of biochemistry. Emphasis is placed on the molecule biology/enzymology of antitumor agents. This tenure-track position in the Department of Biochemistry is part of the Experimental Therapeutics Group of our Comprehensive Cancer Center. This group is developing new drug strategies in cancer through a basic understanding of drug action and cell responses.

Postdoctoral positions are also available in the area of mammalian mitochondrial gene expression. Experience in over expression and purification of recombinant proteins for structural analysis is desired.

Candidates should send curriculum vitae, list of publications and arrange to have three letters of reference sent to: **Dr. Moseley Waite, Chairman, Department of Biochemistry, Medical Center, BGSM, Medical Center Boulevard, Winston-Salem, NC 27157-1016; FAX 919-748-7671.**

*An Equal Opportunity/Affirmative Action Employer.*

## SURGICAL PATHOLOGISTS

**ASSOCIATE/ASSISTANT PROFESSOR.** The Department of Pathology at Fox Chase Cancer Center, under the direction of its Chairman, Jose Russo, M.D., invites applications for two positions in the Division of Anatomic Pathology: one at the associate professor level and one at the assistant professor level. Requirements include Board certification in anatomic pathology. Candidates should have experience in surgical pathology with a special interest in tumor pathology and hematopathology and/or cytopathology. Whereas the positions involve primary responsibilities in diagnostic oncologic pathology, a commitment to basic research in the understanding of the neoplastic process and/or in the development of prognostic indicators of tumor behavior is highly desirable. Special training in the areas of immunopathology, molecular biology, flow cytometry and/or cell biology are welcome. Rank and salary commensurate with experience and training. Please send curriculum vitae to: **Search Committee for Surgical Pathologists, c/o Personnel Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.** *We are an Equal Opportunity/Affirmative Action Employer.*

# At Lilly, Your Scientific Expertise Will Benefit People The World Over.

Eli Lilly and Company is a leader in developing pharmaceutical solutions to a wide variety of health care needs. We've had a direct presence abroad for over 70 years, and today our products are available in more than 110 countries. Supported by a research budget in excess of \$700 million, our 4,000 scientists and technicians are pursuing a wide range of important research projects in order to maintain this international leadership position. We presently have the following positions available:

## SENIOR SCIENTIST - Drug Metabolism and Disposition

The doctoral-level candidate we seek will establish a laboratory program utilizing basic and applied approaches for studying *in vivo* metabolic disposition of drugs. This position requires a strong background in analytical methods, chemistry, and pharmacologic and pharmacokinetic mechanisms as they relate to drug disposition.

## CLINICAL RESEARCH FELLOW - Human Drug Metabolism

This two-year postdoctoral opportunity requires an M.D. or M.D./Ph.D. and involves "phenotyping" the drug metabolizing capabilities of individuals using probe drugs for which the metabolic routes have been characterized. *In vitro* models of human drug metabolism such as cytochrome P450s will be used to define the metabolism of the probe drugs. *In vivo* studies using clinically relevant inducers and inhibitors of the P450s will be used to confirm the *in vitro* experiments. The ideal candidate should have an interest in the human cytochrome P450 and a strong background in analytical techniques.

Lilly offers an excellent salary and benefits package, in addition to ample opportunity for personal and professional development. Qualified applicants should forward their resume, indicating position of interest, to: Christina C. Bodurow, Ph.D., Corporate Recruitment (DD/CF), Eli Lilly and Company, Lilly Corporate Center, Indianapolis, IN 46285. An equal opportunity employer.



## DIRECTOR Center for Molecular Oncology The University of Chicago

The Division of the Biological Sciences of The University of Chicago is soliciting nominations and applications for the position of Director of a newly established Center for Molecular Oncology. The research to be conducted within this center could be in any subfield of molecular oncology. This center is expected to be a major element within the Cancer Research Center of the University.

The Director should be an accomplished basic biological scientist with a record of notable contributions to cancer research. Precise biological science discipline is flexible. The Director will play a central role in the recruitment of a group of molecular oncologists to a new Institute of Molecular Medicine, located in the Jules Knapp Research Building. The Center for Molecular Oncology is one of five biomedical research centers in this building, the others being devoted to the study of human genetics, molecular cardiology, neurobiology and molecular immunology. The Center for Molecular Oncology will have 10,000 square feet of newly constructed research space which has been planned to house six investigators. Funding is available for the establishment and initial support of this major new research program. The activities of the Center will complement ongoing programs in cancer research and molecular oncology at The University. Please address expressions of interest and suggestions, accompanied by resumes and other relevant information to:

Dr. G.S. Getz  
Chairman, Search Committee  
Department of Pathology  
5841 S. Maryland Ave./Box 414  
Chicago, IL 60637



THE UNIVERSITY  
OF CHICAGO

An Affirmative Action Equal Opportunity Employer

## DEAKIN UNIVERSITY AUSTRALIA

Deakin University, Geelong, Victoria, Australia 3217.

### Professor of Aquatic Science

Applications are invited for the appointment to the foundation Chair of Aquatic Science in the multidisciplinary Faculty of Aquatic Science.

The University is seeking to appoint a Professor to provide academic leadership at the chemistry/biology interface in the aquatic science area. The appointee will also play a major role in the expansion of research and graduate studies, in curriculum innovation including off-campus programs, in the growth of external funding initiative and in development of links with chemical and related industries. The appointee will have an established record of research achievement.

Research interests of the Faculty are currently in the area of aquatic ecology, aquaculture, estuarine hydrodynamics and ecotoxicology.

In both research and teaching the Faculty emphasises a multidisciplinary approach.

The appointment, at a salary of A\$67,812 (currently under review in the academic award restructuring negotiations) is for an initial contract of five years which may be renewed for further five year terms. A salary loading for this type of contract is presently under consideration by the University. Additional establishment benefits to facilitate research will be negotiated. It is University policy to encourage staff to engage in appropriate consultancies. The University reserves the right to fill the post by invitation or not to make an appointment.

Enquiries of an academic nature should be directed to the Dean of the Faculty, Dr R G Loch 61 55 618 327. Further information about the University, conditions of employment and method of application may be obtained from the Director, Personnel, Deakin University, Geelong, Victoria, Australia 3217, with whom applications close on 30 August, 1991.

Equal Opportunity is University Policy.



Deakin  
University

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## POSITIONS OPEN

### ENVIRONMENTAL TOXICOLOGIST

The Cooperative Extension Service and The Department of Environmental Toxicology is seeking an Extension Toxicologist up to the **ASSOCIATE PROFESSOR** level/tenure track to promote the transfer of technology and new information to the public, concerned citizens groups and other organizations related to toxic chemicals and their impacts on the environment. The individual must have a strong background in toxicology with good written and oral communication skills. Cooperating in an extensive wildlife and environmental toxicology research initiative on golf courses will be a major effort during the first 3 years. The person must be able to work within the context of an interdisciplinary research team and to promote transfer of new technology and knowledge being developed through research and development in environmental toxicology. Requirements: Ph.D. in an appropriate discipline, excellent scholarly record, university teaching experience or strongly demonstrated potential. Send letter of interest and curriculum vitae and list references by 6 September 1991 to: **Dr. Raymond Noblet, Department of Environmental Toxicology, Clemson University, P.O. Box 709, Pendleton, SC 29670. Affirmative Action/Equal Opportunity Employer.**

### THE INTERNATIONAL LABORATORY FOR RESEARCH ON ANIMAL DISEASES EDUCATION OFFICER

The International Laboratory for Research on Animal Diseases (ILRAD), based in Nairobi, Kenya, is a member of the Consultative Group on International Agricultural Research with the mandate of developing economically improved methods for the control of livestock diseases. Current research focuses on immunological and genetic means of controlling African trypanosomiasis and immunological control of the theileriosis, East Coast fever. Livestock disease research is supported by a programme of socio-economic research and both programmes are integrated with a program of collaborative research, information dissemination and training.

ILRAD wishes to recruit an education officer to join the Programme of Collaborative Research, Information and Training. The successful candidate will be responsible to the head of programme for the development and execution of a continuing education programme at ILRAD. The objective of the programme is to improve and sustain the capacity of national institutions in countries of Africa affected by trypanosomiasis and theileriosis, to develop and apply improved control measures for these diseases. The programme includes opportunities for professional career development of African scientists at graduate and postgraduate level, provision of training courses in relevant technologies for both scientific and technical personnel from national institutions and the continued monitoring and evaluation of the impact of the education program as it relates to national needs. The education officer will ensure that modern training aids are developed and used, that the ILRAD library provides appropriate support for the research and education programmes and that information relating to the research and education programmes is effectively disseminated. The education officer will also be responsible for the organisation of conferences and workshops held to support the research and education programmes.

Applicants will have a doctoral degree in a relevant biological science, an interest in livestock disease control and proven ability to interact with scientists carrying out advanced research in a multidisciplinary framework. The successful candidate should have a strong interest in education and information dissemination and at least 3 years of experience in an educational environment. Experience with the use of microcomputers in data storage, information retrieval and dissemination is essential. Preference will be given to applicants who are bilingual in English and French.

The salary and benefit package are comparable to those offered by similar international organisations, and includes allowances for first arrival, housing, education, commutation and home leave as well as provisions for pension and insurances.

Applications with curriculum vitae and the names and addresses of three referees should be sent to: **Chief Personnel Officer, ILRAD, P.O. Box 30709, Nairobi, Kenya (Telex: 22040; FAX: 593499; Email: BT TYMNET CG1017), not later than 30 September 1991 or until a suitable candidate has been identified.**

*ILRAD is an Equal Opportunity Employer.*

## POSITIONS OPEN

**MICROBIOLOGIST.** Washington State University (WSU)—Tri Cities and the Environmental Sciences Research Center at Pacific Northwest Laboratory (PNL) invite applications for a tenure-track **ASSISTANT PROFESSOR** position in the area of environmental microbiology. The successful candidate is expected to interact with an active group at PNL investigating degradation and stabilization of pollutants. Preference will be given to candidates with expertise in microbial physiology, genetics, or biochemistry related to metabolism or growth of microorganisms. Candidates are expected to develop a strong research program using funds provided for the position and by seeking extramural support. Responsibilities include teaching at the graduate and undergraduate levels at WSU-TriCities and advising graduate students. The individual must have a Ph.D. and a record of accomplishment. Postdoctoral experience is desirable. A letter of application describing interest in the position and qualifications, curriculum vitae, and three letters of reference should be sent to: **Dr. Michael Kahn, Environmental Microbiologist Search, Department of Microbiology, Washington State University, Pullman, WA 99164-4340.** Applications will be accepted until 1 October 1991 or until the position is filled. *WSU is an Equal Opportunity/Affirmative Action Educator and Employer. Protected group members are encouraged to apply.*

### CONGRESSIONAL RESEARCH SERVICE LIBRARY OF CONGRESS

**ANALYST POSITION,** science policy research division. **ANALYST IN SCIENCE AND TECHNOLOGY (Vacancy Announcement 10443)** GS-11 (\$31,116 to \$40,449); GS-12 (\$37,294 to \$48,481). **ANALYST IN LIFE SCIENCES (Vacancy Announcement 10444)** GS-9 (\$25,717 to \$33,430); GS-11 (\$31,116 to \$40,449). Promotion plan to GS-15. For a complete list of all qualification requirements and quality ranking factors, please request a copy of the appropriate vacancy announcement and an Application for Federal Employment (SF-171), by calling the **Human Resources Operations Office at 202-707-1887.** Applications must be received by the **Human Resources Office, LM-107, Washington, DC 20540** no later than 4 September 1991. *U.S. citizenship required. Civil service status not necessary. Equal Opportunity Employer.*

### DIRECTOR, ONCOLOGY CENTER

The Johns Hopkins University School of Medicine and The Johns Hopkins Hospital are seeking a physician-scientist to lead our Department of Oncology, which is also a Comprehensive Cancer Center. The center is one of the largest academically integrated programs in the nation. Applicants should have evidence of leadership qualities and demonstrated outstanding abilities in research and teaching as well as the capability to direct the service missions of the center.

Please send letter of application, curriculum vitae and bibliography to:

**Dr. John D. Stobo**  
Chairman, Oncology Search Committee  
The Johns Hopkins University and  
The Johns Hopkins Hospital  
1830 East Monument Street  
Baltimore, MD 21205

*An Affirmative Action/Equal Opportunity Employer.*

### UNIVERSITY OF WISCONSIN BIOTECHNOLOGY CENTER DIRECTOR PROTEIN PURIFICATION FACILITY

Individual will establish and implement goals for facility and organize and direct the service, research, training and administrative activities. Requires Ph.D. in biological sciences, at least 8 years of laboratory research experience in protein purification and protein chemistry, 2 to 3 years of management experience, including providing services to research scientists, and ability to identify and secure research support.

Not a tenure-track position. Detailed information available by calling: 608-262-8606.

Applications accepted through 30 August, interview conducted in mid-September.

Send curriculum vitae and names of three references to: **Dr. Richard R. Burgess, University of Wisconsin Biotechnology Center, 1710 University Avenue, Madison, WI 53705.**

## POSITIONS OPEN

**VICE CHANCELLOR FOR RESEARCH AND DEAN OF THE GRADUATE COLLEGE.** Nominations and applications are invited for the position of Vice Chancellor for Research and Dean of the Graduate College at the University of Illinois at Urbana-Champaign. This official is one of four Vice Chancellors reporting to the Chancellor of the Urbana-Champaign campus, and is a key campus-level academic administrator.

The responsibilities of the position include: the promotion and maintenance of excellence in research and scholarship; the promotion of excellence in graduate education and oversight of graduate programs; administration of service and research units reporting to the office of the Vice Chancellor for Research and Dean of the Graduate College; interaction with public and private sources of support for university research activities; formulation, implementation, and administration of policies regarding patents, copyrights, and intellectual property rights in research agreements with private sponsors; and administration of federal and state regulations relating to research activities.

The Vice Chancellor and Dean should have a commitment to excellence in research, scholarship, and graduate education in all areas of a leading, comprehensive university. He or she should have the following qualities: leadership ability and success in working with agencies which support research, both within and outside the university; ability to work with administrative units and faculty to maintain and strengthen the University of Illinois at Urbana-Champaign as a major center of the highest quality graduate education and research; and ability as a scholar and teacher, with experience in supervising Ph.D. theses.

Salary open. Position available 21 May 1992. To be assured of full consideration, nominations and applications (including résumé) should be submitted by 15 October 1991 to: **Dr. Theodore L. Brown, Search Committee Chair, c/o Office of the Vice Chancellor for Research, 601 East John Street, 408 Swanlund Building, Champaign, IL 61820; Attention: Harriett Weatherford. University of Illinois at Urbana-Champaign is an Affirmative Action, Equal Opportunity Employer.**

### LABORATORY DIRECTOR PARKINSON'S DISEASE CENTER

The Department of Neurology, Henry Ford Hospital and Health Sciences Center, is seeking an established neuroscientist (Ph.D. or M.D.) to direct research into the mechanisms of neuronal injury and death or with an interest in tissue transplantation. Generous funding is available to set up a major new laboratory for research in Parkinson's disease.

The Department of Neurology is a major research center with active university affiliations and pre- and postdoctoral programs. It has an NINDS Cerebrovascular Research Center as part of a wide spectrum of basic and clinical research in CNS disease. Applicants should send a letter of application, curriculum vitae and three letters of recommendation to: **Jay M. Gorell, M.D., Director, Gossett Parkinson's Disease Center, Department of Neurology, Henry Ford Hospital and Health Sciences Center, 2799 West Grand Boulevard, Detroit, MI 48202. Henry Ford Hospital is an Equal Opportunity Employer.**

### PLANT GENOME PROGRAM DIRECTOR

The National Research Initiative Competitive Grants Program of the U.S. Department of Agriculture (USDA) seeks a qualified scientist to serve as Program Director for grants administration in the area of plant genome. Candidates must have a B.S. or higher degree with major study in plant genetics or a closely related discipline. In addition the candidate must have a Ph.D. or equivalent experience directly related to molecular biology or a closely related discipline.

Closing date is 19 September 1991. For information on the position, contact: **Dr. Sally Rockey, National Research Initiative Competitive Grants Program, CSRS/USDA, Room 323 Aerospace Building, Washington, DC 20250-2200. Telephone: 202-401-5114.** For information on application procedures/forms, contact: **Ms. Kathy Asmussen, personnel staff specialist, 202-475-4811.**

*USDA is an Equal Opportunity Employer.*

## POSITIONS OPEN

### VICE PRESIDENT FOR CLINICAL RESEARCH AND DEVELOPMENT

Responsibilities: overall planning of development projects, including the design of phases I-IV protocols and case report forms for specific studies; in adherence with Food and Drug Administration (FDA) regulations, execution and monitoring of clinical trials conducted by off-site investigators; acquisition, analysis and reporting of clinical data. Identification and recruitment of qualified investigators for development projects; participation and negotiation of contracts, maintaining close relationships with investigators to ensure that they provide high-quality data in a timely way and understand FDA reporting requirements in regard to serious and non-serious adverse reactions; development and maintenance of close working relationships with staff of National Cancer Institute and the FDA, including regular visits to these federal agencies; establish and maintain effective relationships with United States and foreign-based pharmaceutical companies and investigators with whom the corporation has developed specific agreements; work closely and effectively with collaborators outside of as well as within the United States on portions of planning process with worldwide scope; keep abreast of licensing products from other companies and universities and all normal related contractual details.

Requirements: Ph.D. or Pharm.D with major in pharmacology or biostatistics, or M.D., plus 4 years of experience as Vice President for Clinical Research and Development or 4 years of experience in oncology clinical research in pharmaceutical industry. Additional requirements, which may have been gained concurrently, as follows:

(1) Four years of experience in oncology clinical research, including hands-on monitoring of clinical research programs to the standards of FDA "Guidelines for Good Clinical Practice";

(2) Three years of experience in all phases (I-IV) of oncology drug development within the pharmaceutical industry, including medical affairs relating to launching the marketing oncology products;

(3) Two years management experience of clinical research and scientific team in the pharmaceutical industry, including budgeting;

(4) Two years of experience managing a program of scientific and clinical research utilizing outside consultants and investigators.

Hours: 9:00 a.m. to 5:00 p.m., 37.5 hours per week. Salary: \$100,000 per year. Submit résumé or curriculum vitae to: Philadelphia Job Bank, 444 North 3rd Street—3rd Floor, Philadelphia, PA 19123; Job Order No. 4382568.

### RICE UNIVERSITY DEPARTMENT OF BIOCHEMISTRY AND CELL BIOLOGY FACULTY POSITIONS

Applications are invited for tenure-track faculty positions in cell, developmental, and molecular biology, cellular neurobiology, and electron microscopy/image analysis beginning fall 1992. Clear evidence of research excellence is essential. Review of applications will commence 20 September 1991 and positions will remain open until filled. Please send curriculum vitae, summary of past research and future research plans, and three letters of reference to:

Dr. K. S. Matthews, Chair  
Department of Biochemistry and Cell Biology  
Rice University  
Houston, TX 77251

*Rice University is an Equal Opportunity/Affirmative Action Employer; women and minority candidates are encouraged to apply.*

**FACULTY POSITIONS: BIOCHEMISTRY AND MOLECULAR BIOLOGY.** The Department of Biochemistry and Molecular Biology is seeking applicants for tenure-track faculty positions, preferably at the Associate or full Professor level. Outstanding individuals with active, funded research programs and teaching experience are being sought. Applicant should send curriculum vitae, list of publications, description of research and names of three references to: Chairman, Search Committee, Department of Biochemistry and Molecular Biology, Texas College of Osteopathic Medicine (TCOM), 3500 Camp Bowie Boulevard, Fort Worth, TX 76107-2690. TCOM is an Affirmative Action/Equal Opportunity Employer.



## GLAXO INSTITUTE FOR MOLECULAR BIOLOGY

Research at the Glaxo Institute in Geneva is focused on discovering the molecular mechanisms of diseases of the CNS, allergies and inflammatory conditions. We have an outstanding opportunity for a

### Cellular Immunologist to study the role of T lymphocytes in inflammation

The successful applicant will have a key role in research programmes directed towards understanding antigen presentation, T cell activation or cell migration. These projects are aimed at identifying the molecular mechanisms involved in conditions such as chronic inflammation, allergy and neuroinflammation.

The ideal candidate will have several years of relevant post doctoral experience and a proven track record of research in cell biology or cellular immunology.

The institute provides a dynamic international research environment and actively encourages collaborative projects with academic groups as well as the publication and presentation of results at scientific meetings. GIMB is part of the Glaxo group, one of the world's most successful healthcare companies which has an outstanding reputation for the quality of both its research and products.

We offer an excellent compensation and benefits package and significant opportunities for career development. Geneva situated in a very attractive part of Europe, has many advantages as a place to live

If you are interested in this position, please send your curriculum vitae with a list of publications and the names of three referees to: Rita Gloor, Personnel Manager, Glaxo IMB, 14, chemin des Aulx, case postale 674 1228 Plan-Les-Quates, Geneva, Switzerland.



## POSITIONS OPEN

**FACULTY POSITION. ANIMAL CELL BIOLOGY OR ANIMAL PHYSIOLOGY.** Applications are invited for a tenure-track position to begin in August of 1992. The position is being advertised subject to final budgetary approval. The appointment may be made at either the junior or senior level. The successful candidate will teach lecture/laboratory courses in biology for non-majors in his/her area of expertise. The Ph.D. and a commitment to undergraduate teaching are required. The department operates a strong program of research for undergraduates, and the candidate should be capable of directing undergraduate students in independent research projects. Pepperdine is an independent Christian University under the control of a self-perpetuating Board of Regents and is affiliated with the Churches of Christ. A decision on this position will be made by 1 December 1991. Submit letter of application containing a statement of teaching philosophy, names and addresses of three references, and curriculum vitae to: **Dr. Gary Tallman, Natural Science Division, Pepperdine University, Malibu, CA 90263.** *Equal Opportunity Employer.*

### RESEARCH FACULTY POSITION MOLECULAR PATHOGENESIS

The Public Health Research Institute (PHRI) invites applications for appointment as a member of its research faculty at either the junior or senior level. Candidates must have training and experience of the highest quality and an exciting research program addressing fundamental questions on the mechanism of pathogenesis. The research program must be funded or, in the case of a junior applicant, eminently fundable. Candidates should submit curriculum vitae, a statement of research interests and accomplishments, and a list of at least three references. Review of applications will begin on 1 October 1991, but applications will be accepted until the position has been filled. Applications should be sent to: **Dr. Leonard Mindich, Chairman, Recruitment Committee, PHRI, 455 First Avenue, New York, NY 10016.** *The PHRI is an Equal Opportunity Employer.*

### FACULTY POSITIONS DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY THE UNIVERSITY OF CHICAGO

The Department of Biochemistry and Molecular Biology at The University of Chicago invites applications and nominations for several tenure-track and tenured faculty positions to be filled within the next few years. We hope to fill at least two positions in the 1991-1992 academic year. For tenure-track positions, candidates should have a doctoral degree, significant postdoctoral research experience, a strong record of research accomplishment, and demonstrable potential for the development of an independent research career in an academic setting. For tenured positions, candidates must have a record of strong research accomplishments at the forefront of the field. While we are interested in candidates with research interests in any area of modern biochemistry and molecular biology, over the coming academic year our main emphasis is on candidates with research interests in structural biology who employ techniques such as x-ray diffraction, nuclear magnetic resonance spectroscopy, and molecular dynamics. Applications should include curriculum vitae, a list of publications, a summary of current research activities and future research plans, and the names of at least four individuals from whom letters of reference may be solicited. Although there is no formal deadline, we would appreciate receiving applications by 1 October 1991. Please send applications or nominations to:

**Marvin W. Makinen**  
Chairman

Department of Biochemistry and Molecular Biology  
The University of Chicago  
Chicago, IL 60637

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

**A POSTDOCTORAL POSITION** in neuro-oncology is available to study mechanisms underlying differences between normal and transformed glial cells to repair alkylating agent-induced DNA damage. Experience in molecular biology, cell culture and enzyme assays is desirable. Send curriculum vitae and three references to: **J. R. Silber, Department of Neurological Surgery, RI-20, University of Washington, Seattle, WA 98195.**

## POSITIONS OPEN

### SENIOR STAFF, RESEARCH AND GRADUATE AFFAIRS

Duties include: graduate program quality assessment; public policy; academic/industry/foundation relations; liaison with science and health organizations. Inquiries should be directed to:

#### Search Committee

American Association of Colleges of Pharmacy  
1426 Prince Street, Alexandria, VA 22314  
Telephone: 703-739-2330

*An Equal Opportunity/Affirmative Action Employer.*

University of Minnesota. Entry-level tenure-track **FACULTY POSITION** in environmental engineering microbiology. Please send a detailed résumé and names of three or more references to: **Dr. W. Maier, Department of Civil and Mineral Engineering, 500 Pillsbury Drive SE, Minneapolis, MN 55455.** Application deadline 31 October 1991. *The University of Minnesota is an Equal Opportunity Educator and Employer.*

### FACULTY POSITION PHYSIOLOGICAL PSYCHOLOGIST/ BEHAVIORAL NEUROSCIENTIST

College of the Holy Cross invites applications for a tenure-track position beginning fall 1992. Candidates must be committed to both research and teaching in a small, liberal arts college. Candidates with research interests in any area of neuroscience/psychobiology will be considered. Course requirements will include introductory psychology, experimental psychology, and courses within a psychobiology concentration in the candidate's area of interest. Ph.D. is required. Rank and salary are open. Applications must be received by 18 October 1991. Materials must include curriculum vitae; three letters of recommendation, at least one of which comments on teaching or teaching potential; and recent reprints. Send all materials to: **John Axelsson, Chair, Department of Psychology, College of the Holy Cross, Worcester, MA 01610.** *The College of the Holy Cross, a Jesuit, undergraduate institution with a strong commitment to teaching, scholarship, and the liberal arts, is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION.** Joint academic/industry appointment (University of Washington School of Medicine/Cell Systems Corporation). Candidate to develop systems to study monolayers of polar microvascular endothelial cells. Research focused on adhesion/invasion interactions. Two-year appointment. Curriculum vitae and references: **Cell Systems Corporation, 12815 NE 124, Kirkland, WA 98034.** *The University of Washington and Cell Systems are Equal Opportunity/Affirmative Action Employers.*



**POSTDOCTORAL POSITIONS.** Available to study the molecular biology of the neutrophil oxidase complex involved in superoxide production. Projects include expression and analysis of recombinant oxidase proteins during cellular differentiation, targeted mutagenesis of specific genes in murine embryonic stem cells, and investigation of inherited oxidase defects in chronic granulomatous disease. Experience in molecular biology, biochemistry and/or cell biology is required. Please send curriculum vitae and names of three references to: **Mary C. Dinanuer, M.D., Ph.D., H. B. Wells Center for Pediatric Research, James Whitcomb Riley Hospital for Children, Indiana University School of Medicine, 702 Barnhill Drive, Indianapolis, IN 46202.** *Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION.** Available for person with background in electron microscopy to study the role of the nuclear matrix in heat-induced cell death and cell division. Salary: \$22,000 per year. *Applicants must be U.S. citizens or permanent residents.* Send curriculum vitae and names of three references to: **Ronald A. Coss, Ph.D., Radiation Oncology and Nuclear Medicine, Thomas Jefferson University, 1020 Sansom Street, Philadelphia, PA 19107-5004.** *Thomas Jefferson University is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

## POSITIONS OPEN

**CELL AND MOLECULAR BIOLOGY.** Postdoctoral positions are available in the Department of Cellular and Molecular Physiology at the College of Medicine of The Pennsylvania State University. Projects are available in the following areas: regulation of mammalian gene expression; control of cell growth and differentiation; cell-extracellular matrix interactions; human molecular genetics. Highly qualified candidates who hold a Ph.D. or an equivalent doctoral degree may apply by submitting curriculum vitae, statement of career goals and the names of three references to: **Joanna Floros, Ph.D., or D. Eugene Rannels, Ph.D., Department of Cellular and Molecular Physiology, The Milton S. Hershey Medical Center, Penn State University, P.O. Box 850, Hershey, PA 17033.** *Pennsylvania State University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

### DROSOPHILA MOLECULAR NEUROBIOLOGY

**POSTDOCTORAL POSITION** in molecular neurobiology to study the development and regulation of inhibitory neurotransmitter systems in *Drosophila*. Experience in molecular biology, immunocytochemistry, and/or *Drosophila* genetics is essential. This NIH-funded position begins in the fall 1991. Submit curriculum vitae and names of three references to: **Dr. F. Rob Jackson, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.** *An Equal Opportunity/Affirmative Action Employer M/F/H.*

**POSTDOCTORAL POSITION.** Available immediately to study the molecular biology of the murine immune system and its responses to viral pathogens under the direction of Dr. Ronald C. Kennedy. Research will include: (1) isolation and characterization of immunoglobulin genes; (2) production and characterization of recombinant immunoglobulins in eukaryotic expression systems. Expertise in molecular biology is essential. Experience with murine immunological systems helpful. Send curriculum vitae, a summary of research interests and the names and telephone numbers of three references to: **Personnel Director (144), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78228-0147.** *Equal Opportunity Employer, M/F.*

**POSTDOCTORAL POSITION.** Available immediately for projects using computerized microscopic image analysis to study cellular movement and receptors and intracellular detection of HIV nucleic acids. Experience with computerized image analysis and molecular biology preferred. Please send curriculum vitae and names of three references to: **Elliot Goldstein, M.D., Director, Division of Infectious Diseases, Department of Medicine, University of Kansas Medical Center, 39th and Rainbow Boulevard, Kansas City, KS 66103.** *The University of Kansas Medical Center is an Equal Opportunity Employer.*

**POSTDOCTORAL POSITION.** Available immediately to study transcriptional regulation of the human pyruvate dehydrogenase  $\alpha$  and  $\beta$  subunit genes in cells and transgenic animals. Some experience with molecular biology methods is required. Send curriculum vitae and names of three references to: **Dr. M. S. Patel, Department of Biochemistry, Case Western Reserve University School of Medicine, Cleveland, OH 44106.**

### POSTDOCTORAL POSITIONS

Postdoctoral positions in molecular and cellular mechanisms of carcinogenesis are available at The University of Texas M. D. Anderson Cancer Center-Science Park. Research programs focus on the following areas: DNA repair and mutagenesis, carcinogen metabolism, adduct formation, tumor promotion, role of oncogenes and tumor suppressor genes in multistage carcinogenesis, normal and tumor cell differentiation, retrovirology, chemoprevention and nutrition in cancer. Applicants must have a Ph.D., M.D., or D.V.M. degree. For application forms, contact: **Dr. Thomas Slaga, Director, University of Texas Science Park-Research Division, P.O. Box 389, Smithville, TX 78957.** Telephone: 512-237-2403. *Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

## POSITIONS OPEN

**POSTDOCTORAL POSITIONS.** Open for individuals with expertise in molecular biology or protein chemistry. Research focuses on lipid mediators, signal transduction, and second messengers involved in inflammatory responses. Please send curriculum vitae and three references to: **Fred L. Snyder, Ph.D., Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117.**

**POSTDOCTORAL POSITION IN VASCULAR BIOLOGY.** Available immediately to study cerebral circulation and brain function in a well-funded, productive laboratory. Emphasis will be on cellular and molecular approaches to elucidation of control mechanisms of vascular functions in normal and damaged vessels, and interactions between vessels and glia/neurons. Please submit curriculum vitae with names and addresses of three references to: **Dr. David Busija, Department of Physiology and Pharmacology, Bowman Gray School of Medicine, Wake Forest University, Medical Center Boulevard, Winston-Salem, NC 27157-1083.**

### OXIDATIVE DNA DAMAGE

A unique opportunity for a biochemist to pursue exciting postdoctoral research in the area of oxidative DNA damage in mammalian cells. Position requires knowledge of DNA chemistry and free radical biochemistry. Experience in cell culture, chromatin isolation and use of GC/MS advantageous. Fluency in English and ability to drive a car desirable. The position is for 3 years and applications will be received until 6 September 1991. Please send résumé and three references to: **Drs. Govind Rao or Miral Dizdaroğlu at Department of Chemical and Biochemical Engineering, 227 TRC, University of Maryland at Baltimore County (UMBC), Baltimore, MD 21228. UMBC is an Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL.** Electron microscopy laboratory, TEM, SEM, light and confocal microscopy. Expertise in one of following: computer-assisted image analysis, confocal microscopy, freeze fracture.

Respond to: **Department MH-EM, BOEHRINGER INGELHEIM PHARMACEUTICALS, INC., P.O. Box 368, Ridgefield, CT 06877. Equal Opportunity Employer, M/F/H/V.**

**POSTDOCTORAL/LECTURER POSITION.** Available in January 1992 to join an NIH-funded investigation of the disposition of reactive metabolites of drugs, mechanism for their reaction with proteins and toxicological properties. Clinical studies with aged patients will be conducted in collaboration with University of Texas Health Sciences Center, San Antonio. Candidate should have a Ph.D. in biological sciences or chemistry. Experience with pharmacokinetics and HPLC is desirable. An English proficiency is required for the position of Lecturer. Send curriculum vitae and three letters attesting to research and teaching ability to: **Dr. Philip C. Smith, College of Pharmacy, PHR 4.214, The University of Texas at Austin, Austin, TX 78712. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL FELLOWSHIP.** Available immediately to characterize the effects of chemopreventive agents on oncogene mRNA using PCR. Previous experience with PCR and/or molecular biology preferred. Contact: **Donald M. Miller, M.D. at 205-934-1977, University of Alabama at Birmingham, 1918 University Boulevard, Birmingham, AL 35294.**

**MAMMALIAN MOLECULAR GENETICIST.** Position is available in a research group studying the organization-regulation of mammalian genes and the molecular characterization of genetic mutations at the levels of DNA and protein sequences. The geneticist will participate in the research project on the regulation of mammalian gene expression. A **POSTDOCTORAL FELLOW** will work on protein engineering of mammalian enzymes. Applicants should have a Ph.D. or equivalent degree in molecular biology, genetics, or biochemistry and experience in recombinant DNA techniques and mammalian cell culture. Candidates with up to 3 years of postdoctoral experience will be considered. For more information, contact **Dr. Steven Li at 919-541-4253.** For prompt consideration, send cover letter indicating area of interest, curriculum vitae and three letters of reference by 30 September 1991 to: **Mr. Bruce Wiggins, NIEHS Personnel Office (HNV39), P.O. Box 12233, Research Triangle Park, NC 27709. NIH is an Equal Opportunity Employer.**

## DIRECTOR, ACADEMIC INFORMATION SYSTEMS

### Center for Knowledge Management

#### University of California, San Francisco

The Center for Knowledge Management is an innovative division created by the Division of Academic Affairs and the University Library to serve as a campus focal point for knowledge-based applications of information technology.

The Director, AIS, will perform a variety of challenging administrative functions by serving as a member of the senior management team. Some duties will include: participating in the Center's ongoing strategic planning; directing operational planning for applications, computing and communications technologies; designing, planning, implementing and maintaining the computing and communications infrastructure to support the Library's bibliographic information systems and services and the Center's knowledge-based activities.

The qualified candidate must have a PhD in Information or Computer Science, or equivalent, and an additional subject degree in the biological sciences, with a minimum of 5 years' experience in developing and managing Information Systems in a complex environment, preferably an academic health sciences center. This position also requires superior interpersonal and communication skills, strong team management ability, knowledge of current trends in information technology, and a strong commitment to service functions. Salary range at appointment: \$66,900-\$83,600.

Application deadline : September 30, 1991. Please forward resumes to: **Kenneth R. Weeks, Assistant Director for Planning & Administration, UCSF Library, Box 0840, San Francisco, CA 94143-0840. AA/EOE/MFHV**

**UCSF**

## Inhalation Scientist

3M, a Fortune 50 Company, is seeking a qualified scientist to lead the establishment and operation of an inhalation laboratory for the Pharmaceuticals Division.

3M Pharmaceuticals is recognized as a global leader in aerosol drug delivery and is committed to expanding this business. The new lab will function in both a research and development capacity as well as conducting GLP studies to support preclinical toxicology of new drugs. This position requires an in-depth working knowledge of applied aerosol science. An advanced degree is not necessarily a prerequisite. Demonstration of initiative, creativity, hands-on inhalation experience, and excellent team building skills are desirable.

3M offers an excellent salary and benefit package, and is located in the progressive Twin Cities metropolitan area with easy access to beautiful outdoor recreation activities.

No agency responses or telephone inquiries, please.

To be considered for this position, please submit your resume to:

**B.E. Dayton  
Staffing & College Relations  
Building 224-1W-02 3M Center  
St. Paul, MN 55144**

We Are An Equal Opportunity Employer

**3M**



The University  
of  
British Columbia

## Department of Chemistry ASSISTANT PROFESSOR

The Department of Chemistry, University of British Columbia, invites applications for a tenure-track assistant professorship in organic chemistry, starting July 1, 1992. Preference will be given to candidates who propose to carry out research in the organic chemistry of biological systems or in organic polymer chemistry; however, outstanding candidates in related areas of organic chemistry will be considered. A Ph.D., postdoctoral experience, and a strong research track record are required. The successful candidate would be expected to teach chemistry courses at the undergraduate and graduate level. The salary will be commensurate with education and experience.

The University of British Columbia encourages qualified women and minority applicants. The position is subject to final budgetary approval and, in accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

Applications should consist of a curriculum vitae, list of publications, summary of research interests, a detailed research proposal, and the names and addresses of at least three references. The applicant should arrange for the complete application and letters of reference to be sent by October 1, 1991 directly to: **Professor E. Piers, Chairperson, Future Appointments Committee, Department of Chemistry, THE UNIVERSITY OF BRITISH COLUMBIA, 2036 Main Mall, Vancouver, B.C. CANADA V6T 1Z1.**

## Scientist Molecular Pharmacology

The Medical Research Division of American Cyanamid Company has an immediate opportunity available for an individual to join the Molecular Pharmacology Group of the Cardiovascular/Central Nervous System Disease Research Section. The BS/MS level scientist we seek will conduct research on the molecular aspects of receptor-ligand interactions and signal transduction mechanisms. Training in recombinant DNA techniques is required. Additional experience in performing receptor binding assays would be beneficial.

American Cyanamid offers a competitive salary along with an attractive benefits package including a 401K Savings Plan and relocation assistance.

We are located in Rockland County on the 580 acre campus-like setting of Lederle Laboratories. We are 25 miles north of NYC which affords easy access to several universities and medical schools. For consideration, interested candidates may send a resume/c.v. with the names and telephone



numbers of three references to:  
Medical Research Division, Dept.  
RN, Lederle Laboratories, Pearl

River, NY 10965. An Equal Opportunity  
Employer M/F

**Dedicated People Dedicated To People Since 1906**

## RESEARCH OPPORTUNITIES IN BIOTECHNOLOGY

The Department of Biotechnology is seeking applicants for our ongoing program of crop improvement. Pioneer offers competitive salaries, excellent facilities and a highly cooperative research environment. Successful candidates will be expected to interact extensively with ongoing programs in transformation, gene expression, gene isolation or RFLP programs.

**PROJECT LEADER, DNA CORE FACILITY** — The DNA Core Facility within the Gene Expression Group will meet the needs of the entire department for design and construction of vectors for proper expression in plants; oligonucleotide synthesis; plasmid DNA preparation; DNA minipreps; and strain inventory. The successful candidate for this position will be responsible for managing the DNA Core Facility and these functions in the facility. A Ph.D. or equivalent work experience in molecular biology or related field and 3-5 years relevant laboratory experience are required. Excellent skills in DNA methods, good organizational skills and the ability to manage and train personnel are also essential.

**RESEARCH ASSOCIATE, OLIGONUCLEOTIDE SYNTHESIS (DNA CORE FACILITY)** — The successful candidate for this research associate position will be responsible for the synthesis and purification of oligonucleotides. This person will also have the opportunity to participate as part of a team in the design and construction of vectors for expression in plant cells. A B.S. degree or equivalent work experience in biology, chemistry or related field and 3 years of directly related laboratory experience are required. Direct experience in oligonucleotide synthesis and working knowledge of basic molecular methods are strongly preferred. Experience in gene cloning or gene constructions would be considered an additional asset.

Applications received by September 6, 1991 will be assured of consideration. However, applications will be considered until the positions are filled.

Pioneer Hi-Bred International, Inc. is an Equal Opportunity/Affirmative Action employer. Please send resume including the names of three references and the position for which you are applying to:



**PIONEER**

**PIONEER HI-BRED INTERNATIONAL, INC.**  
Plant Breeding Division  
Department of Biotechnology Research  
Attn: Jane Blacketer  
P.O. Box 38  
Johnston, Iowa 50131-0038

French Pharmaceutical research center  
situated near Paris is recruiting a :

## RESEARCH PHARMACOLOGIST (POST - DOCTORAL LEVEL)

The post involves research into aspects of  
memory and neurodegenerative diseases.

The candidate should be familiar with  
behaviour studies in non-rodent species  
and should be able to work as part of the  
team as well as individually to implement a  
personal research programme.

Please submit C.V. + Hand written  
letter on the ref. of 607 to  
R.S.C.G. CARRIERES-2, rue Rouget  
de Lisle - 92130 Issy-Les-Moulineaux  
FRANCE.



## BIOCHEMIST

The Molecular Pharmacology and Biochemistry Department is seeking one candidate with a BS or MS degree or equivalent plus extensive experience to join a multi-disciplinary research team studying the structure-function relationships of receptors. Candidates should have extensive experience in mutagenesis, protein expression, biochemical or biophysical characterization membrane receptors. A demonstrated ability for problem solving and independent basic research is desirable.

Merck Sharp and Dohme Research Laboratories is located in Rahway, NJ approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. For consideration, send your resume with the names of three references to **Human Resources Manager, Merck & Co., Inc., P.O. Box 2000, AD #90, Rahway, NJ 07065 (RY80-A3).**

EEO/AA/VH EMPLOYER



Merck & Co., Inc.

## Postdoctoral Scientist Opportunities

The Skin Biology Unit of the R.W. Johnson Pharmaceutical Research Institute is seeking postdoctoral fellows who have earned their PhD in experimental biological science and who are interested in joining a group studying the basic biological problems of hair growth.

Candidates should be familiar with the techniques of molecular biology and recombinant technology, and familiar with the problems of embryology, and developmental biology. The positions offer full laboratory support, the most state-of-the-art tools, and readily accessible informational resources.

The R.W. Johnson Pharmaceutical Research Institute integrates worldwide R&D efforts for various Johnson & Johnson Companies to maximize our traditional R&D efforts and our strengths in biotechnology. We offer competitive salaries and comprehensive benefits at our campus-like setting in Raritan, New Jersey ... midway between New York City and Philadelphia. Ours is a smoke-free workplace.

Please submit your curriculum vitae and the names of 3 references to: Mr. Thomas Hutton, Human Resources Dept. 38, R.W. Johnson Pharmaceutical Research Institute, P.O. Box 300, Raritan, New Jersey 08869-0602.

An Equal Opportunity Employer, M/F



R.W. JOHNSON

PHARMACEUTICAL RESEARCH INSTITUTE

A Johnson & Johnson Company

## ORGANIC CHEMIST

### POSTDOCTORAL FELLOW

We are a state-of-the-art cancer research institute, located on the campus of the New York Medical College in lower Westchester.

We now have an excellent career opportunity for a devoted professional with a Ph.D. in Organic Chemistry.

You will apply synthetic and analytical skills to challenging problems relating to the metabolism of carcinogenic nitrosamines.

We offer a competitive salary, an excellent benefits package, plus the opportunity to make a meaningful contribution to the medical field. For confidential consideration, please send your *curriculum vitae* to: **Department SSH, American Health Foundation, One Dana Road, Valhalla, New York 10595.** We are an equal opportunity employer m/f/h/v.

American Health  
Foundation



## R & D Scientists

**CANJI, INC.**, a startup, bio-pharmaceutical company in the San Diego area, is engaged in the development of innovative cancer diagnostics and therapeutics based on tumor suppressor gene technology. We have challenging opportunities available in the following positions:

**Analytical Chemist**—To analyze primary structure of protein and peptides and to develop and validate methods for product assay, material testing and quality control. Will develop stability protocol and give analytical support to pharmacology, protein purification and clinical testing. Requires Ph.D. in Biochemistry or M.S. with 3 years of experience.

**Process Scientist**—To purify recombinant proteins according to GMP guidelines. Write batch record for scaling-up protein purification methods and perform process monitoring and quality control testing. Requires an M.S. in Biochemistry or a B.S. with 3+ years of industrial experience.

**Pharmacologist**—To design and carry out efficacy and pharmacokinetic studies utilizing animal tumor models to test cancer suppressor drugs. Requires Ph.D. in Clinical Pharmacology and 3+ years of pharmaceutical experience.

### Group Leader and Scientist Positions available in:

**Gene Therapy Development**—To develop high titer retroviral vectors as gene therapy vehicles employing tumor suppressor genes. Requires Ph.D. in Molecular Biology with a strong background and postdoctoral experience in viral vectors, particularly retroviral vectors. Knowledge of tumor suppressor genes/oncogenes preferred.

**Exploratory Research**—To develop alternative gene delivery systems. Requires Ph.D. in Molecular Biology with 2+ (Scientist) or 4+ (Group Leader) years' postdoctoral experience. Knowledge and experience in T-cell immunology required and in mammalian viral vectors preferred.

Canji offers successful candidates competitive compensation and benefits. Please send curriculum vitae and names and addresses of three references to: **Personnel, CANJI, INC., 11077 N. Torrey Pines Road, La Jolla, CA 92037.** An Equal Opportunity Employer.



## POSITIONS OPEN

**POSTDOCTORAL FELLOW.** A postdoctoral position is available to study the aggregation and crystallization kinetics of amino acids and proteins. Experience with light scattering is desirable. Please send curriculum vitae and names of three references to: **Dr. Nair Rodríguez, College of Pharmacy, The University of Michigan, Ann Arbor, MI 48109-1065. Affirmative Action/Equal Opportunity Employer.**

**STRUCTURAL BIOLOGY OF RECEPTORS—POSTDOCTORAL FELLOWSHIP.** The paradigm of binary and ternary complex formation in the generation of molecular signals of importance in regulation of cellular function is the structural biology goal. Exploration by mutagenesis of the three-dimensional structure: function of receptors that mediate catalytic cofactor function and initiate the coagulation protease cascades as in thrombogenesis and inflammation is the model. Environment is multidisciplinary with a focus on the structural basis of molecular function and of cellular responses. Applicants should have demonstrated experience in molecular biology and must be U.S. citizens or permanent residents. Apply to: **Thomas S. Edgington, M.D., Vascular Cell and Molecular Biology Program, The Scripps Research Institute, 10666 North Torrey Pines Road, La Jolla, CA 92037.**

### POSTDOCTORAL FELLOWSHIP THE ROCKEFELLER UNIVERSITY

Postdoctoral fellowship in the area of microbe-induced autoimmunity and human genetics. Applicant should have expertise in area of molecular biology with emphasis on eukaryotic systems. Knowledge of protein chemistry and immunology also desirable. Send curriculum vitae, résumé of research interests and names of three references, to: **Dr. John B. Zabriskie, Laboratory of Bacterial Pathogenesis and Immunology, Rockefeller University, 1230 York Avenue, New York, NY 10021. An Equal Opportunity Employer/Affirmative Action Employer.**

**POSTDOCTORAL FELLOWSHIP.** Available immediately to study the mechanistic basis of increased clearance of drugs in cystic fibrosis. Background in drug metabolism, biochemistry, or pharmacology is desirable. Experience with isolation of metabolic enzymes (e.g., phenol sulfotransferases, N-acetyltransferases), and use of cDNA probes is preferred. The position offers a unique opportunity to work in a multidisciplinary environment. Send curriculum vitae and three letters of references to: **Dr. J. D. Unadkat, Department of Pharmaceutics, BG-20, University of Washington, Seattle, WA 98195. Telephone: 206-685-2869. Equal Opportunity Employer.**

### MOLECULAR PLANT PATHOLOGY POSTDOCTORAL AND PREDOCTORAL FELLOWS

The Center for Engineering Plants for Resistance Against Pathogens (CEPRAP), an NSF Science and Technology Center, recently was established at the University of California, Davis. CEPRAP is focused on the molecular biology of the interaction of plants, especially tomato, with viral, fungal, bacterial and nematode pathogens. Four research groups are housed at the CEPRAP facility: Resistance Genes, Plant Responses, Cellular Pathogens, and Engineered Resistance. Several postdoctoral and predoctoral positions funded by the center grant are available, immediately and for fall 1992. Additional positions are available for holders of fellowships. Applicants should have a strong interest in the genetics, molecular biology or biochemistry of plant-pathogen interactions. Applications and three letters of reference should be sent to: **Dr. Brett Tyler, CEPRAP Admissions Committee, Department of Plant Pathology, University of California, Davis, CA 95616. FAX: 916-752-5674. Positions are available until filled. The University of California is an Equal Opportunity/Affirmative Action Employer.**

### RESEARCH ASSOCIATE

Applications are invited for a research position available immediately in an independent start-up laboratory developing ultrasensitive diagnostic assays for human disease agents. Experience in biochemistry and molecular genetics or cell biology required; familiarity with monoclonal antibody techniques and molecular cloning useful. Apply by mailing résumé and a brief statement of research interests to: **EPG Laboratories, 111 East Shore Road, Manhasset, LI, NY 11030.**

## POSITIONS OPEN

### DROSOPHILA MOLECULAR NEUROBIOLOGY

**POSTDOCTORAL ASSOCIATE** position in *Drosophila* molecular neurobiology available fall 1991. Research concerns *Drosophila* genes involved in the expression of biological rhythms. Experience in molecular biology and/or *Drosophila* genetics is essential. Submit curriculum vitae and names of three references to: **Dr. F. Rob Jackson, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545. An Equal Opportunity/Affirmative Action Employer, M/F/H.**

### POSTDOCTORAL RESEARCH ON ANTIVIRAL DRUGS

Postdoctoral Fellow or Research Associate to be involved in studies of a new class of inhibitors of HIV, HBV, and herpes replication using in vitro and in vivo antiviral models. Experience in molecular virology and performance of animal viral assays essential. Will mechanistically probe the action of a novel class of antiretroviral drugs. Please send application with references to: **Thomas Merigan, M.D., Room S-156, Center for AIDS Research, Stanford University, Stanford, CA 94305-5107. Equal Opportunity Employer/Affirmative Action.**

**POSTDOCTORAL RESEARCH ASSOCIATE.** The Solar Energy Research Institute (SERI), located in Golden, Colorado, is the nation's primary federal laboratory for the study of renewable energy technologies and solar energy. We currently have an opportunity available for a Postdoctoral Research Associate working in the Biotechnology Research Branch. The project is in the area of basic research in the enzymology of lipid synthesis in eukaryotic microalgae. The qualifications for this position include a Ph.D. in biochemistry, biology, chemistry, microbiology or other related field. The incumbent must have experience isolating proteins, performing enzyme assays and lipid analyses. U.S. citizenship and permanent residency is required. For immediate consideration, please send your résumé to: **Human Resources Office, RP2320-129, SERI, 1617 Cole Boulevard, Golden, CO 80401. We are an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.**

### DEPARTMENT OF PERIODONTICS SCHOOL OF DENTISTRY THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO

**A POSTDOCTORAL RESEARCH POSITION** available immediately to participate in an active research program examining host-parasite interactions and the pathogenic mechanisms of periodontopathic bacteria. This 2-year position requires background in protein chemistry, isolation of bacterial membranes, and a working ability in molecular biology and microbiology. Successful applicant will conduct studies of the role of bacterial proteins as virulence factors in tissue-destructive mechanisms. The studies will involve the use of both in vitro and animal models of host-parasite interactions.

Send curriculum vitae to: **Dr. Stanley C. Holt, The University of Texas, Health Science Center at San Antonio, Department of Periodontics, 7703 Floyd Curl Drive, San Antonio, TX 78284-7894. The University of Texas Health Science Center at San Antonio is an Affirmative Action/Equal Opportunity Employer.**

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

**POSTDOCTORAL RESEARCH ASSOCIATE.** Immunologist, GS-11/12 (\$31,116 to \$37,294). Position available immediately with the USDA, ARS, Helminthic Diseases Laboratory (HDL), Beltsville, Maryland, to conduct research on mast cell activity and interleukin expression in parasite-resistant breeds of livestock. The position requires a recent Ph.D. and training in cellular immunology; some veterinary experience would be helpful. Opportunities exist for additional training in areas of molecular biology and biochemistry. Send curriculum vitae to: **Dr. H. Ray Gamble, USDA, ARS, LPSI, HDL, Building 1040, Room 2, Beltsville Agricultural Research Center-East, Beltsville, MD 20705. FAX: 301-344-4306. The USDA is an Equal Employment Opportunity Employer.**

## POSITIONS OPEN

### POSTDOCTORAL/RESEARCH ASSOCIATE MOLECULAR BIOLOGY—MOLECULAR TOXICOLOGY

To study molecular mechanism(s) involved in the expression of proteins following xenobiotic insult. Techniques include cell culture, immunoblot analysis, hybridization analysis (Northern, Southern, etc.), PCR, primer extension, DNA library construction/screening, cloning, sequencing, mobility shift assays, transfection, cell-free translation and transcription. Send curriculum vitae and the names of three references to: **Dr. Raymond F. Novak, Director, Institute of Chemical Toxicology, 2727 Second Avenue, Room 4000, Detroit, MI 48201. Wayne State is an Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL RESEARCH ASSOCIATE.

To work on the molecular biology and genetic transformation in marine algae. Training in molecular biology and plant cell culture techniques is required. Experience with protoplast culture and electroporation highly desirable. Send résumé (hiring is contingent upon eligibility to work in the United States) and three letters of recommendation to: **Professor S. C. Minocha, Department of Plant Biology, University of New Hampshire, Durham, NH 03824. Telephone: 603-862-3840; FAX: 603-862-4757. Application deadline: 31 August 1991. Women and minorities are encouraged to apply. University of New Hampshire is an Affirmative Action/Equal Employment Opportunity Employer.**

### POSTDOCTORAL RESEARCH ASSOCIATE

Candidate must have a Ph.D. in biochemistry with a minimum of 2 years of training in biochemical techniques of analysis of phosphoinositides and cytoskeletal fractions. Work involves extensive use of organic solvents and radioisotopes, including <sup>32</sup>P, as well as obtaining and preparing human platelets. Candidate must be a U.S. citizen or resident alien. Forty-hour work week, 8 a.m. to 5 p.m., \$22,250 per year. Send résumés only to: **Dr. S. E. Rittenhouse, Department of Biochemistry, Given Building, Burlington, VT 05405. Job order #410415.**

### SENIOR RESEARCH ASSISTANT

The Howard Hughes Medical Institute's affiliated laboratory at The Rockefeller University has an immediate opening for a highly motivated senior researcher to participate in ongoing projects in a biophysics laboratory. Candidate must have demonstrated competence in purifying proteins and nucleic acids for macromolecular crystallography. Familiarity with FPLC/HPLC, automated nucleic acid synthesis, preparative electrophoresis and bacterial and cell culture procedures is essential. A Bachelor's degree in biochemistry or a related field is required. Excellent benefits and pleasant working environment. Salary commensurate with experience. Send résumé with list of references to: **Howard Hughes Medical Institute, c/o The Rockefeller University, Personnel Office, 1230 York Avenue, New York, NY 10021. Or telephone 212-570-8300. Equal Opportunity Employer.**

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# Postdoctoral Fellowships in the Biological Sciences

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**A**S A LEADER in discovery research, we are integrating new molecular and cellular technologies with established approaches to drug design. Our research and development team has fostered an atmosphere of innovation and creativity by emphasizing basic biomedical research approaches to the study of human disease. Critical to the creation of this research environment is our postdoctoral fellowship training program. Trainees are involved in an interdisciplinary program to explore the basic mechanisms underlying many biological and cellular processes in therapeutic areas such as cardiovascular and neurological disorders, cancer, infectious disease, immunopathology, diabetes and others. Interactions with our collaborators at nearby University of Michigan and many other academic institutions are encouraged, and publication and presentation of results is expected. Established research programs include:

## Gene Regulation and Expression

Study the structure and regulation of genes that play a role in human disease. Investigate the biology of transcription factors and posttranslational protein modification, hormonal control of gene expression, DNA repair mechanisms, viral gene expression, and DNA binding motifs. Participate in the design of new compounds to control gene expression.

## Intracellular Signaling

Using modern techniques in molecular and cellular biology, explore the fundamental interactions between receptor/oncogene products and key signaling proteins. Investigate the roles of protein phosphorylation and dephosphorylation, second messengers, phospholipid and arachidonate metabolism in the regulation of cellular growth and metabolism.

## Membrane Biology

Participate in multidisciplinary research programs to clone and characterize membrane receptors, transporters or ion channels. Use molecular receptor binding or electrophysiological techniques to explore new directions in the biology of neurotransmitters, growth factors, or cell-cell interactions.

## Molecular Engineering and Biochemistry

Apply molecular and computational techniques such as site-directed mutagenesis, computer modeling, x-ray crystallography, and NMR to study and design molecular structures with specific functions. Explore mechanistic aspects of enzymes such as proteases, protein kinases, phosphatases, reverse transcriptase and others.

## Animal Models of Disease

Investigate the pathophysiology of human disease processes using animal models. Integrate basic approaches in biochemistry, physiology and histology to evaluate the pathogenesis of diseases involving behavioral, metabolic, ischemic or vascular disorders.

## Mechanistic Toxicology

Using both in vitro and in vivo models, elucidate the pathogenesis of toxicity of drugs, as related to molecular mechanisms of cell proliferation and immunotoxicology. Explore the mechanisms of mutagenesis and cytotoxicity.

Interested scientists should forward a CV and list of references to Human Resources, Box JDM-PDBS, PARKE-DAVIS, 2800 Plymouth Road, Ann Arbor, MI 48105. Smoke-Free Work Environment. Equal Opportunity in Action.



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# Scientists

At Genentech, we are proud of the reputation we have built for the quality, commitment and diversity of our research efforts as well as for our business success. Our commitment to R&D starts with finding the top scientific talent in many fields of biological science, and continues with an R&D expenditure of 40% of revenues. Our scientists publish over 220 papers per year that are cited an average of 45 times per paper, significantly more than any other biotechnology company or top academic institution. We are currently building an \$80 million, 250,000-square-foot research facility, scheduled for completion in 1992, to house our Research organization.

We are interested in hiring a few outstanding scientists currently at the postdoctoral or assistant professor level who can join us in our long-term commitment to research. You should have a superior publication record with graduate or postdoctoral experience in excellent laboratories as well as the drive, creativity and vision to make outstanding scientific advances. You should also share our ultimate goal of developing products that help combat serious human medical conditions. We will set mutually agreeable research goals and provide laboratory space and support.

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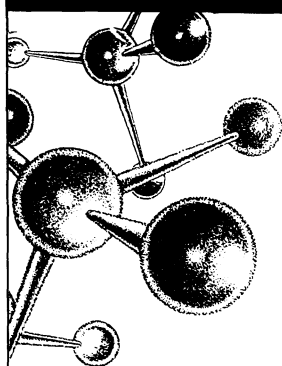
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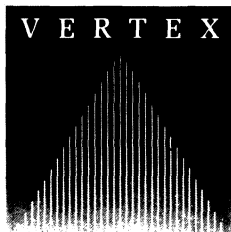
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Vertex is a public company founded in 1989 to develop human therapeutics through the integrated application of structure-based rational drug design. We're using the latest advances in chemistry, biology and physics to design unique molecules based on the structural features of proteins involved in the control of disease processes. Our goal is to become a major pharmaceutical firm by taking advantage of rational drug design in the discovery and development of novel drugs.

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At Vertex, our chemistry leaders are all active experimentalists. As one of those leaders, you will work closely with biologists, biophysicists and computational chemists in an intense and challenging interdisciplinary environment where your proven synthetic organic chemistry skills and medicinal chemical experience can be used and appreciated. The successful candidate must have three or more years of experience in medicinal chemistry within the pharmaceutical industry and must currently be spending a majority of time at the bench. We are seeking those with a Bachelor's, a Master's or a Ph.D. degree in synthetic organic chemistry who have a compelling and a continued record of independent medicinal chemical research. An eagerness and ability to apply insights from biology, structural biophysics and computational chemistry to the process of drug design is essential.

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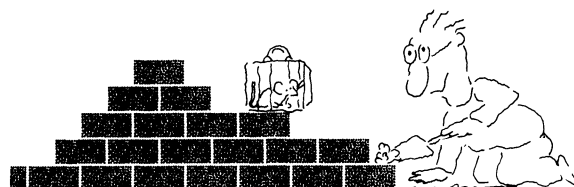
Our Research Division has facilities in Radnor, PA, Princeton, NJ and Rouses Point, NY, and employs over 2000 people actively involved in research and development. Our commitment to bring to market the right products at the right time depends upon the efforts of our talented R&D teams.

We currently have an opportunity for a Research Scientist in our Radnor, PA facility. Position requires a PhD in Nutrition or related area with a minimum of three years relevant research experience and some experience in immunology. You will be responsible for investigating the interactions of nutrition with the immune system using a wide variety of in vivo and in vitro assay technologies. Additionally, you may participate in the investigation of novel ingredients to infant formula.

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## POSITIONS OPEN

### ASSOCIATE RESEARCH SCIENTIST

To join ongoing research on fluid and electrolyte transport across ocular epithelia. Work involves obtaining cells by culture or dissection, assaying their transport activity with radiolabels, measuring electrical properties and rate of fluid movement across epithelial layers, performing cell volume measurements by optical techniques, and using biochemical and molecular biological techniques to study epithelial proteins. Ph.D. or M.D.; training in ophthalmology (clinical or research) preferred. Salary: \$27,000 per year. Start: 1 September 1991. Send curriculum vitae to: **Dr. Jorge Fischbarg, Department of Ophthalmology, 630 West 168th Street, New York, NY 10032.** *Columbia University is an Equal Opportunity/Affirmative Action Employer.*

**RESEARCH ENGINEER** for northeastern Ohio manufacturer to design, develop and apply artificial neural networks based upon naturally occurring nervous systems to the development of expert systems. Will use artificial intelligence technologies and knowledge engineering to capture and retain knowledge and decision-making processes of experts and create computer programs for their expertise. Will be Systems Manager for our Artificial Intelligence Laboratory. No requirement for specific experience in job as described, but to qualify applicants must have a graduate degree in biomedical engineering and, as part of an academic program or industrial employment, 2 years of research experience in the area of artificial intelligence and knowledge engineering including development of expert systems and artificial neural networks through simulation and mathematical modeling of sensor-motor coordination found in biological nervous systems using Explorer LISP machine, VAX and SUN computer hardware, LISP, Flavors and C++ computer languages; and Personal Consultant Plus Expert System shell, and including at least 6 months of experience as Systems Manager in an artificial intelligence laboratory. *Must have proof of legal authority to work permanently in the United States.* Forty hours per week, 8:30 a.m. to 5:00 p.m. Salary: \$3175 to \$3340 per month. Benefits. Send résumé (NO CALLS) to: **J. Davies, JO#1255758, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

## POSITIONS OPEN

**RESEARCH SCIENTIST** required for the development of new techniques to expedite the localization and mapping of DNA sequences to chromosomes and identification of genes underlying specific genetic disorders and neoplastic diseases. Specific requirements include experience with production of high-quality metaphase chromosome spreads, high-resolution in situ suppression hybridization using multicolor fluorescence, laser scanning confocal microscopy, detailed computer-enhanced image analysis and electronic reconstruction of chromosome images, analysis of DNA sequence in interphase nuclei by in situ hybridization, pulsed field gel electrophoresis, isolation and detailed characterization of human DNA contained in yeast artificial chromosomes, positioning of yeast artificial chromosome clones to specific chromosomal locations by molecular analysis, physical mapping large segments of human chromosomes, and experience in other techniques of physical and genetic mapping as applied to the study of the human genome.

Ph.D. in biomedical science with extensive research laboratory experience and training in areas of cytogenetics, molecular genetics and DNA biochemistry. M.D. degree with specialization in hematology/oncology and clinical residency in hematology/oncology highly desirable; or, Ph.D. degree in hematology and oncology with laboratory training in neoplasia, cell biology, cytogenetics. Clinical experience in hematology highly desirable.

Salary negotiable in accordance with NIH guidelines. Direct inquiries to: **Box 9, SCIENCE Classified Advertising, 1333 H Street, N.W., Room 940, Washington, DC 20005.**

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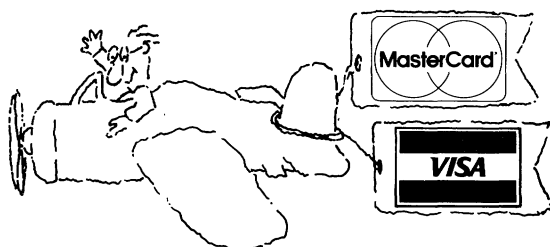
A leader in DNA diagnosis of human disease is seeking a highly motivated individual to join our technical service department as an **APPLICATION LABORATORY TECHNICIAN**. B.S./M.S. in molecular biology with experience in Northern/Southern analysis, chromosome in situ, cloning, PCR and FISH. Forward résumé to: **ONCOR, Human Relations, 209 Perry Parkway, Suite 7, Gaithersburg, MD 20877.** *An Equal Opportunity Employer.*

## POSITIONS OPEN

### PROFESSIONAL OPPORTUNITIES POSITIONS AVAILABLE

The Patuxent Wildlife Research Center, Fish and Wildlife Service, U.S. Department of the Interior, has continuing opportunities for **SCIENTISTS** with training or experience in the field of ecotoxicology. Ongoing research efforts include studies on the effects of agricultural and industrial contamination on wildlife and their supporting terrestrial, estuarine and wetland habitats, biomarkers of contaminant exposure and damage in migratory birds and other species, and population level effects of environmental pollution. Permanent and temporary (postdoctoral and sabbatical) positions, from entry to senior level, are available in community/population modeling, ecological risk assessment, wildlife toxicology, wetland ecology, immunotoxicology, histopathology, biochemical toxicology, and environmental chemistry. Please forward curriculum vitae, Standard Form 171 (if available) and a statement of interest to: **Barnett A. Rattner, Ph.D., Deputy Chief, Branch of Environmental Contaminants Research, Patuxent Wildlife Research Center, Laurel, MD 20708.** *An Equal Opportunity Employer.*

**ASSISTANT STAFF SCIENTIST.** Medical facility in northeastern Ohio. Uses technical expertise in the isolation, purification, characterization and reconstitution of plasma membrane and associated proteins. Researches the biochemistry of proteins involved in adrenergic receptor-mediated signal transduction. Performs and interprets kinetic analyses, thermodynamic analyses and studies of enzymes and other biomolecular reactions. Applies chromatographic procedures used in protein purification; and utilizes gel electrophoresis, radioligand binding assays, radioimmunoassays, and detergents and phospholipids for protein solubilization and reconstitution. Requires Ph.D. in biochemistry and 3 years of experience in the position offered or as a Research Associate. Forty hours per week, Monday through Friday, 8 a.m. to 5 p.m., \$42,000 per year. *Must have proof of legal authority to work permanently in the United States.* Send résumé, in duplicate (no calls), to: **S. Holton, J.O. #1255136, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**



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This is an unusual opportunity for outstanding individuals to grow quickly with a young company. SangStat Medical offers an excellent compensation and benefits package, including significant equity participation. Please send a CV including references, in confidence, to:

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One or more positions (Postdoctoral Research Fellow or Staff Scientist) are available to perform research involving fundamental studies of atomic-scale geochemical processes at mineral-water interfaces. Highly qualified candidates having backgrounds in low-temperature aqueous geochemistry, mineralogy, surface science, x-ray spectroscopy, and a strong interest in exploring geochemical applications of high-brilliance synchrotron radiation, are invited to apply. Applicants should have a Ph.D. in a relevant discipline. Level of appointment will be commensurate with candidate's experience. Interested individuals should send resume and names of three references to: **Ms. Susan Walker, Box J-CMT-Postdoc-55, Employment and Placement, ARGONNE NATIONAL LABORATORY, 9700 South Cass Avenue, Argonne, IL 60439.** Argonne is an equal/affirmative action employer.



**BioOrganic Chemist**

The PARKE-DAVIS Pharmaceutical Research Division of the Warner-Lambert Company, a leader in pharmaceutical discovery research, has an immediate opening in its newly created BioOrganic Chemistry Section for a PhD BioOrganic Chemist.

This successful candidate will have experience in and a solid understanding of organic chemistry. A working knowledge in the chemistry and manipulation of nucleic acids and/or experience in the modern techniques of molecular biology is required. This position will allow the successful candidate to have an immediate impact on a new exploratory effort within the company's Biological Chemistry Department.

PARKE-DAVIS' modern and expanding facilities are located in Ann Arbor, Michigan adjacent to the University of Michigan. Our dynamic and challenging research environment offers ample opportunity for personal and professional creativity and advancement. If you are qualified please forward your resume and a list of references to **Human Resources Department, Box JDM-91073, PARKE-DAVIS Pharmaceutical Research Division, Warner-Lambert Company, 2800 Plymouth Road, Ann Arbor, MI 48106-1047.** "Smoke-Free Work Environment"

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We're a leader in monoclonal antibody technology, developing therapeutic products for life altering diseases, and are anticipating rapid growth ahead. Currently, we have an excellent opportunity for an Immunology Scientist.

You will be examining the regulation of cellular immune responses with special emphasis on the nature of interactions between T cell surface antigens and their ligands. Applications of this research will include development of novel targeted drug delivery systems and methods to induce immunosuppression. Qualifications include a Ph.D. in Immunology, Cell Biology, or a related discipline; 0 to 5 years' experience in monitoring T and B cell activation and function as demonstrated by publication in peer-reviewed journals; familiarity with models of immunosuppression is highly desirable; ability to work independently and as part of a team.

Xoma offers a competitive salary and excellent benefits. For consideration, please forward your resume and salary history to: XOMA Corporation, Attn: Technical Recruiter, 2910 7th Street, Berkeley, CA 94710. EOE.

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**Mechanism Based Drug Discovery**

The Department of Biochemical Parasitology in the Merck Sharp & Dohme Research Laboratories has an immediate opening for a Senior Research Biochemist interested in exploring the biochemistry of the free living nematode, *Caenorhabditis elegans* in order to identify novel drug targets for the treatment and prevention of parasitic diseases.

Primary responsibilities include characterization of receptor-dependent transmembrane signaling mechanisms, intracellular signals and the design of screens for the discovery of novel antiparasitic agents. This position offers a unique opportunity to interact with a team of scientists in various disciplines focused on developing new chemotherapeutic agents.

The position requires supervisory experience, a Ph.D. or equivalent in Biochemistry and at least 3 years post-doctoral experience in a relevant field of biochemistry. Superior skills in protein purification are essential. The applicant's practical skills should be complemented by a high level of initiative and superior communication skills.

Merck Sharp & Dohme Research Laboratories is located in Rahway, New Jersey approximately 25 miles from New York City. Our facilities are state-of-the-art and our renowned research environment is excellent. For consideration, please send your resume with the names of three references to **Human Resources Manager, Merck & Co., P.O. Box 2000, WBC-155, Dept. S-25, Rahway, NJ 07065.**

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## POSITIONS OPEN

**ANDROLOGIST.** The Department of Obstetrics and Gynecology of the University of Arizona has an opening for an andrologist. Minimum qualifications include a Master's degree, although a Ph.D. is preferred. This individual will direct the andrology laboratory and conduct research in andrology with the opportunity to teach technicians, medical and graduate students. Duties include the performance of semen testing and processing for clinical use, development and implementations of clinical research protocols in andrology. Preference is given to experience in clinical andrology with proven research capability. The candidate must be willing to learn and use CASA. *The University of Arizona is an Equal Employment Opportunity/Affirmative Action Employer. Women and minorities are urged to apply.* Send curriculum vitae to: **Ponjola Coney, M.D., Director, Reproductive Endocrinology and Infertility, Department of Obstetrics and Gynecology, Arizona Health Science Center, 1501 North Campbell Avenue, Tucson, AZ 85724.**

## RESEARCH SCIENTIST

Position available for Ph.D. with postdoctoral experience to study molecular aspects of childhood leukemia. Experience in molecular biology and preferably in immunology is necessary.

The Department of Pediatrics at Cedars-Sinai Medical Center has excellent facilities in the Steven Spielberg Pediatric Research Center, is academically linked with the University of California, Los Angeles, and offers an exciting and diverse research experience.

For consideration, please send curriculum vitae to:

**Nathan Fischel-Ghodesian, M.D.**  
Director of Molecular Hematology  
Department of Pediatrics  
Cedars-Sinai Medical Center  
8700 Beverly Boulevard  
Los Angeles, CA 90048

**SENIOR SCIENTIST:** Conduct fundamental research-analysis and characterization of polymers to provide insight re mechanisms to improve existing or develop new products. Develop new technologies and methods. Understand, characterize and analyze polymers and materials using thermal analysis techniques such as DSC and TGA/MS and spectroscopic methods. Install and interface mass spectrometer to existing TGA instrument. Design and test configuration for materials. Conduct ongoing fluorescence experiments. Design and develop new fluorescence spectroscopic techniques. Requirements: Ph.D. in physical chemistry; 3 years of experience with proven creative ability in hot oven mass spectrometry and spectroscopic analysis. Strong background in thermodynamics, statistical mechanics and electron spectroscopy. Proficiency in computers and interfacing of IBM/PC and DEC. Demonstrated ability to use and maintain vacuum systems, ion optics, optical systems and digital and analog circuits. Hot oven mass spectrometry and spectroscopic analysis. Forty hours per week; \$50,000 per year; résumé or curriculum vitae to: Philadelphia Job Bank, 444 North 3rd Street, Philadelphia, PA 19123, JO#4382563 with proof of legal authority to work in the United States.

## STAFF SCIENTIST

**FRED HUTCHINSON**

## CANCER RESEARCH CENTER (FHCRC)

Applications are invited for a Ph.D. level position in a well-established transplantation biology laboratory for an investigator with molecular biology experience. Interest and knowledge of mammalian MHC genes and oligonucleotide hybridization techniques necessary. Specifically we are seeking someone to establish molecular typing methods for DLA (canine) Class I and Class II alleles for bone marrow transplantation studies in the dog. This position provides an opportunity to interact in a large, internationally known research group and to perform groundbreaking work in the DLA system. The position will be fully funded for 3 years as work establishing a typing laboratory is initiated. It is anticipated that opportunities for collaborative and independent research as well as refinement of oligoprobing techniques will be pursued in subsequent years. A support technician and supply budget will be provided. *We are an Equal Opportunity Employer and provide a smoke-free environment.* Salary will be commensurate with experience. Applications, including curriculum vitae, statement of research interest, and desired salary range, should be sent to: **Barbara Johnston, D.V.M., FHCRC, 1124 Columbia Street, Seattle, WA 98104.**

## POSITIONS OPEN

### ELECTRON MICROSCOPE (EM) LABORATORY SUPERVISOR

The Institute of Chemical Toxicology, Wayne State University, is seeking a supervisor manager of the EM facility. Duties involve carrying out research and assisting other investigators requiring EM use. Candidates with experience in autoradiography, immunocytochemistry and in situ hybridization will be given preference. Please send curriculum vitae and names, addresses and telephone numbers of three references to: **Dr. D. P. Chopra, Institute of Chemical Toxicology, Wayne State University, 2727 Second Avenue, Room 4000, Detroit, MI 48201. Wayne State is an Equal Opportunity/Affirmative Action Employer.**

### RESEARCH ASSOCIATE

Children's Hospital of Orange County now has the following positions available for research associate:

• **BONE MARROW TRANSPLANT LABORATORY.** Design and performance of immunologic experiments related to the purging and cultivation of bone marrow. Responsible for tissue culture maintenance, experimentation, and calculation and presentation of all work. Master's degree (or higher) in biological science with 5 plus years of experience in immunology research required. Extensive knowledge in tissue culture, certification in radioisotope use, experience in receptor analysis, monoclonal antibodies, ELISA techniques, and clonogenic and bioassay also required.

• **PEDIATRIC CANCER RESEARCH LABORATORY.** Performance of basic and clinical research involving the investigation of molecular aspects of the characteristics and function of hematopoietic cells; these projects shall be managed by the laboratory supervisor under the direction of the research director. Responsible for training of laboratory assistants and hematology fellow in specific procedures of the molecular hematology section. Ph.D. degree in molecular biology, or related field, with 5 plus years of experience in molecular biology research or hematology research required. Extensive knowledge and certification in radioisotope handling and use, experience in DNA/RNA sequencing, cloning, Southern, Western, and Northern blotting also required.

Please send résumé and salary history to: **Children's Hospital of Orange County, 455 South Main Street, Orange, CA 92668, attention: Personnel.**

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## MEETINGS

The John Marshall Law School's Center for Intellectual Property Law in conjunction with McAndrews, Held and Malloy in Chicago will present **NATIONAL SYMPOSIUM ON PATENT PROTECTION FOR MEDICAL DEVICES** on 26 and 27 September 1991. This timely, first-of-its-kind symposium gives businessmen, inventors, and patent attorneys the tools to make patent decisions wisely. Do not miss this unique opportunity to understand the important issues facing patent protection for medical devices. For more information contact: **The John Marshall Law School Center for Intellectual Property Law, 315 South Plymouth Court, Chicago, IL 60604. Barbara Skinner, telephone: 312-987-1422; FAX: 312-427-5280.**

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**ORGANIC CHEMIST.** The Positron Emission Tomography Program at the University of California, Los Angeles (UCLA), has a postdoctoral position available. The project involves the synthesis of new biochemical probes for in vivo assessment of pre- and postsynaptic neurotransmitter function. Applicants must have a Ph.D. degree in synthetic organic chemistry. Opportunity for expanded knowledge and training in this rapidly expanding field. Salary range: \$26,220 to \$35,808 per year depending on qualifications plus benefits. Send résumé to: **Dr. Jorge R. Barrio, UCLA School of Medicine, Division of Nuclear Medicine and Biophysics, Los Angeles, CA 90024-1721. Equal Opportunity/Affirmative Action Employer.**

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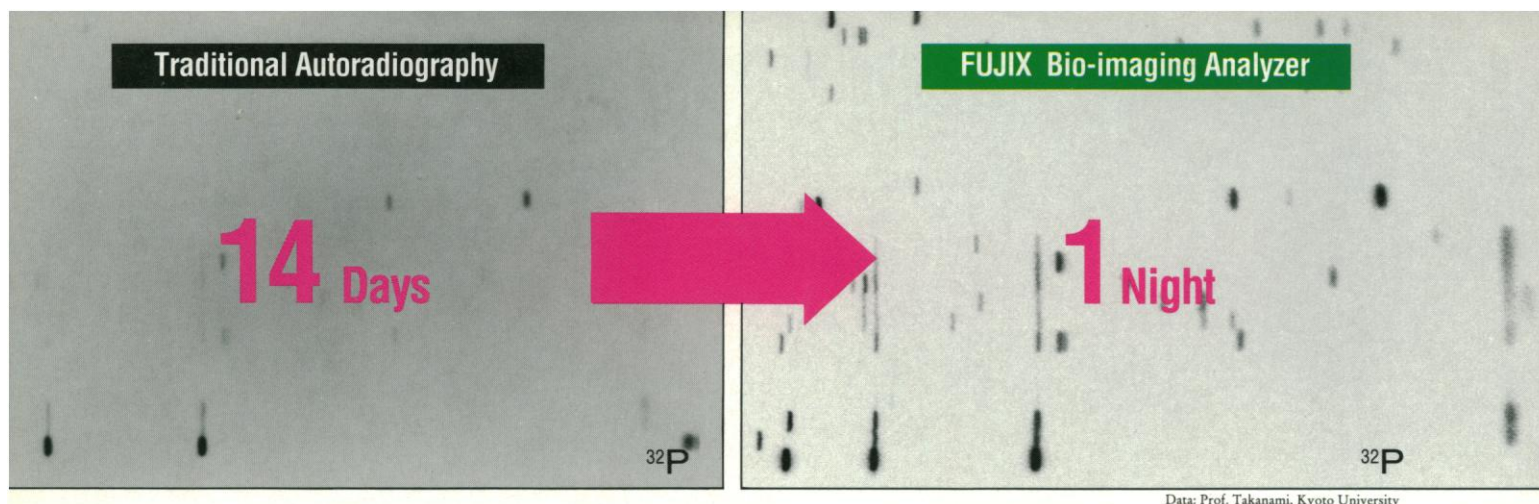
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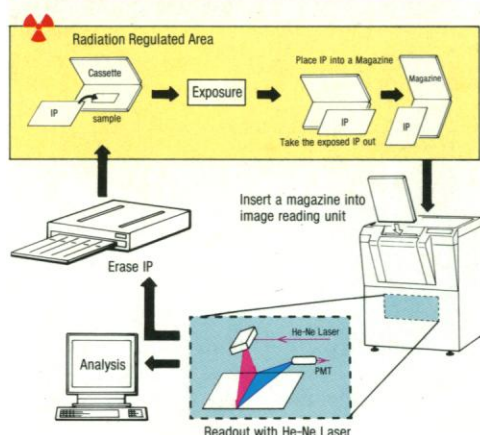
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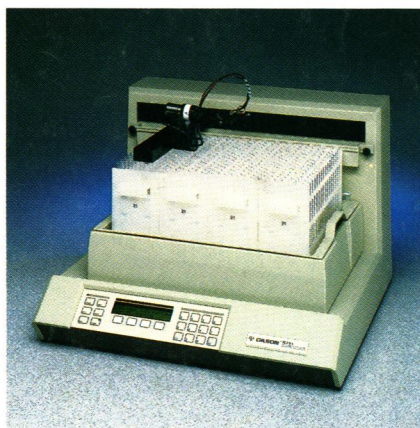
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