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Wang, X. et al. Matrix metalloproteinase inhibitor BB-94 inhibits human colon tumor growth and spread in a patient like orthotopic model in nude mice. *Cancer Res.* 54, 4726-28 1994

Hoffman, R., Orthotopic is orthodox: why orthotopic transplant metastatic models are different from all other models? *J. Cellular Biochem.* 56, 1-4, 1994



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PRODUCTS & MATERIALS

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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.

Its cellulose-acetate membranes are low in protein binding. **Sigma Chemical. Circle 139.**

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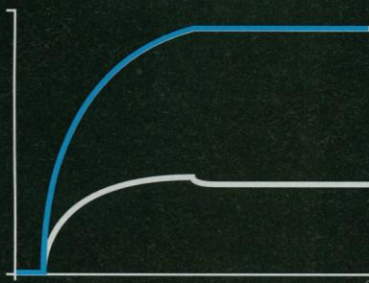
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Nucleic Acid Assay Kit

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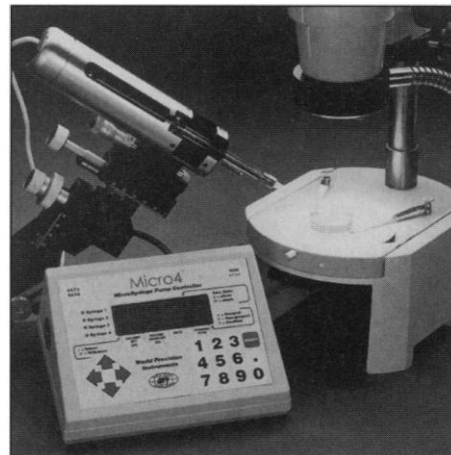
Electrophoresis Analysis Software

Advanced Quantifier is a new family of one-dimensional electrophoresis analysis software for both IBM-compatible computers and the PowerMac. Through the use of advanced proprietary algorithms, the software automatically finds lanes and bands. On command, the software sizes and quantifies the bands through the use of "whole band" algorithms providing accurate and reproducible results. The reports generated from the results can be customized by the user. Advanced Quantifier 1-D Match can match more than 1000 lanes. The matching results can be displayed in matrix or table form as well as in dendrograms. The matching capability can be used for forensic and paternity studies, restriction fragment length polymorphism studies, and other genetic mapping and typing applications. **Bio Image. Circle 145.**

UltraMicroPump

The UltraMicroPump dispenses picoliter sample volumes through analytical syringes. The instrument can be used in a wide range

of applications including intracellular injection, micro-delivery of biochemical agents and dyes, cell separation, and in vivo fertilization. Through use of a 1- μ l-syringe, the device can dispense as little as 52 pl per step



advance of the syringe piston. Minimum dead volume is attained by positioning the pump directly at the delivery site. Microsyringe sizes of 0.5 to 100 μ l are easily installed into the syringe cradle. **World Precision Instruments. Circle 146.**

Literature

Separation Science Today is a newsletter with technical hints, product updates, and troubleshooting tips for the chromatographer. A recent issue features a platinum line of high-performance liquid chromatography columns and activity-tested steel tubing for gas chromatography. **Alltech Associates. Circle 147.**

The Anatomical Products Catalog features charts, posters, models, simulators, and more. **Anatomical Chart. Circle 148.**

Laboratory Furnaces describes a line of box furnaces, tube furnaces, crucible furnaces, controllers, and hot plates with engineering features for optimum temperature performance, operator safety, and energy efficiency. Features include microprocessor controllers, innovative multilayer insulation, double-wall cabinet construction, and patented heating elements. **Lindberg/Blue M. Circle 149.**

iDX-Prime Digital Imaging & Processing explains the benefits of a software system that allows straightforward collection of images and x-ray maps without the clutter of multiple open windows. The brochure highlights the program's wide range of capabilities including spectra collection; editing, exporting, and saving data; and electron image and x-ray map acquisition. **Edax International. Circle 150.**

SCIENCE

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For **SYMPOSIUM AND ANNOUNCEMENT** display advertisements, turn to page 385.

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POSITIONS OPEN

FACULTY POSITIONS COMPARATIVE MEDICINE BASIC SCIENTISTS

Department of Comparative Medicine
Stanford University School of Medicine

The Department of Comparative Medicine has tenure-track faculty positions in the basic sciences as ASSISTANT or ASSOCIATE PROFESSOR. Candidates must have received the Ph.D. degree and have a demonstrable record of research productivity as evidenced by grant support and publications in peer reviewed journals. The D.V.M. or V.M.D. degree from an institution accredited by the American Veterinary Medical Association is highly desirable, and preference will be given to veterinary candidates with Board certification in recognized specialties of veterinary medicine. The Department of Comparative Medicine is a basic science department within the School of Medicine. Areas of particular relevance to the mission of the department include pathology, neuroscience, transgenic mouse biology, molecular biology, and gene therapy. In addition to its academic functions, the Department of Comparative Medicine provides the clinical care and management for a large, modern, AAALAC-accredited, central animal facility that includes a 24-hour critical care unit staffed by veterinary technicians. Research strengths at Stanford include organ transplantation, immunology, genetics, infectious diseases, neuroscience, molecular biology, noninvasive nuclear and magnetic imaging, canine inherited diseases, anesthesia, primate behavior, and transgenic mouse studies among others. Interested candidates should send a letter containing a description of their career goals and research interests, their curriculum vitae, and names and addresses of five references to: Linda C. Cork, D.V.M., Ph.D., Professor and Chairman, Department of Comparative Medicine, MSOB X347, Stanford University Medical Center, Stanford, CA 94305-5415. Applications will be reviewed upon receipt and searches will be continued until all positions have been filled. *Stanford University is committed to increasing representation of women and members of minority groups on its faculty, and particularly encourages applications from such candidates.*

EDUCATION COORDINATOR

Joseph W. Jones Ecological Research Center
Newton, Georgia

The J. W. Jones Ecological Research Center located in southwest Georgia is seeking an EDUCATION COORDINATOR to develop a strong education program in natural resource management and policy. The program will provide a significant link between the ongoing research and conservation programs of the Center and natural resource management and policy constituencies. The individual will provide direction, supervision, and coordination for the Education Program of the Jones Center.

Qualifications include a B.S. degree, advanced degree(s) and/or extensive experience in biological sciences or natural resource science education. The successful applicant will have experience in ecological and natural resource education at a professional level. Experience in the design, delivery, and implementation of innovative learning approaches is desirable. The applicant should have excellent communication and organization skills; proven ability to work effectively with diverse educational, natural resource, private sector, and governmental constituencies; and demonstrated abilities in the publication of professional and popular articles. Familiarity with southeastern ecosystems and their management is highly desirable. Successful pursuit of grant opportunities is desirable.

Compensation package is competitive and commensurate with experience. Letters of application, résumés, and names of three references should be mailed by September 1, 1996 to: Dr. Elizabeth R. Blood, Chair of Search Committee, J. W. Jones Ecological Research Center, Route 2, Box 2324, Newton, GA 31770. FAX: 912-734-4707; Telephone: 912-734-4706. *The J. W. Jones Ecological Research Center is an Equal Opportunity Employer.*

PROFESSOR AND HEAD—Department of Entomology. Kansas State University is seeking applications/nominations for the position of Head of the Department of Entomology. Please request a full, detailed announcement from: John C. Reese, Department of Entomology, Waters Hall, Kansas State University, Manhattan, KS 66506-4004. Telephone: 913-532-4708; FAX: 913-532-6232. Review of applications will start September 15, 1996; position is available January 15, 1997. *Kansas State University is an Affirmative Action/Equal Opportunity Employer and encourages diversity among its employees.*

POSITIONS OPEN

FACULTY POSITION Medicinal and Natural Products Chemistry The University of Iowa, College of Pharmacy

The Division of Medicinal and Natural Products Chemistry of the College of Pharmacy invites applications for a 12-month, tenure-track faculty position at the ASSISTANT or ASSOCIATE PROFESSOR level. Applicants must hold the Ph.D. degree in medicinal and/or natural products chemistry or synthetic organic chemistry. Postdoctoral experience is required. Candidates are expected to bring contemporary chemical, biochemical, and/or biological approaches necessary to establish and maintain a rigorous, extramurally funded research program relating to the design, discovery, or mechanism of action of biological active substances. We encourage applicants with interests in research areas such as synthetic organic medicinal chemistry, combinatorial chemistry, theoretical medicinal chemistry, natural products, and molecular recognition fields. The successful applicant will participate in team-taught undergraduate courses, develop and teach graduate course offerings, and attract graduate students to the Ph.D. program. Applications will be received until the position is filled. Interested applicants should submit a curriculum vitae; statement of research interest; and the names, addresses, and telephone numbers of three references to: John P. N. Rosazza, Ph.D., Professor and Head, Medicinal and Natural Products Chemistry, College of Pharmacy, University of Iowa, Iowa City, IA 52242. Telephone: 319-335-8842; FAX: 319-335-8766. *The University of Iowa is an Affirmative Action/Equal Opportunity Employer. Women and minority candidates are encouraged to apply.*

SUPERVISORY ENVIRONMENTAL SCIENTIST (GS 14)

Salary Range \$61,348 to \$79,454

The Subsurface Protection and Remediation Division of the National Risk Management Research Laboratory, United States Environmental Protection Agency (USEPA) is looking for a supervisory environmental scientist to serve as CHIEF of its Biotic Processes and Applications Branch. The primary function of the position is to provide leadership to the Branch in planning, conducting, and overseeing research to meet the Agency's needs for data and models of subsurface phenomena for application to the protection and restoration of the subsurface environment and those ecosystems, such as watersheds, that are strongly influenced by ground water flow and contaminant transport. The successful candidate will have an established record of research and publication in the physical or biological sciences or engineering. This is a supervisory position and requires the ability to lead interdisciplinary research teams. The Subsurface Protection and Remediation Division of the National Risk Management Research Laboratory is a national research facility with a staff of about 150. *U.S. citizenship is a requirement for employment.* For further information and a copy of the official announcement and the necessary forms please contact: The Federal Job Opportunities Bulletin Board (BBS), Telephone: 912-757-3100; the Career America Connection, Telephone: 912-757-3000; or the EPA Las Vegas Job Line, Telephone: 702-798-2418. *The USEPA is an Equal Opportunity Employer and does not discriminate in hiring on the basis of sexual orientation.*

RESEARCH SCIENTIST

A Research Scientist position (Ph.D., M.D., or equivalent) is available at the Deborah Research Institute. The position is the equivalent of an ASSOCIATE PROFESSOR in academia. The ideal candidate will be actively engaged in research focusing on cardiac pharmacology and signal transduction mechanisms (G-proteins, kinases, cyclases) and will be able to interact with molecular biologists and cardiovascular physiologists. This person should be a highly independent investigator with a history of extramural funding. Please send letter of application, curriculum vitae, three recent publications, and three letters of reference to: Richard E. Klabunde, Ph.D., Director, Deborah Research Institute, 20 Pine Mill Road, Browns Mills, NJ 08015-1799. *Candidates must meet all requirements to work within the U.S. Equal Opportunity Employer.*

University of Maryland, Poultry Science Department is seeking applications for two tenure-track FACULTY positions specializing in nutrient metabolism. Contact Dr. Nickolas Zimmermann, Chair, Search Committee, Department of Poultry Science, University of Maryland, MD 20742-2315 for requirements and additional information. *The University of Maryland is an Equal Opportunity/Affirmative Action Employer.*



Childrens Hospital Los Angeles

THE RESEARCH INSTITUTE

AT

CHILDRENS HOSPITAL LOS ANGELES



The Research Institute at Childrens Hospital Los Angeles is one of the six major pediatric research facilities in the United States. The Institute's mission is to foster an environment of scientific excellence where biomedical research will lead to discoveries involving the molecular and clinical understanding of childhood development and the implementation of procedures to diagnose, treat, and prevent pediatric diseases and promote child health. The Institute is affiliated with the University of Southern California and is seeking individuals for postdoctoral positions in the following research programs:

Cancer Biology: The program focuses on the biology and treatment of neural tumors (neuroblastoma, retinoblastoma, and brain tumors). Emphasis is on molecular and cellular mechanisms regulating cell growth, differentiation, invasion, and metastasis.

Gene Therapy: The focus of this program is to develop novel cell type specific delivery vehicles to express genes in human cells with emphasis on the treatment of genetic childhood diseases, cancer, and AIDS.

Hematopoietic Stem Cell Biology: The program focuses on the clinical utilization and biology of hematopoietic stem cells with a particular emphasis on lymphoid and myeloid differentiation. It is an integration of clinical, translational, and basic research, the goal of which is to improve therapies for children with immunological, genetic, hematological, and oncological disease.

AIDS and Host Defense: The program focuses on the pathophysiology of the blood-brain barrier in infectious diseases and inflammation with a particular emphasis on endothelial cell biology. The group examines interactions between vascular endothelial cells, bacteria, and host cells to gain a better understanding of the pathophysiology of human central nervous system disorders such as meningitis, vaso-occlusive disease, and strokes.

Cellular and Developmental Biology: The major objective of this program is to understand, at a molecular and cellular level, processes that are involved in pediatric diseases due to abnormal development. The group more specifically focuses on the role of members of the TGF- β family in lung and craniofacial development.

Endocrinology and Metabolism: The program's research interest is in the understanding of mechanisms of pancreatic islet auto-injury, particularly in the role of the immune system in type I diabetes in children.

Requirements: Candidates should have a Ph.D., M.D., or M.D./Ph.D. with previous laboratory research experience. Positions carry a minimum of 2 years' commitment, and salary is commensurate with previous experience and qualifications.

Interested candidates should send a curriculum vitae and three letters of recommendation to **Yves A. DeClerck, M.D., Director, Research Institute, 4650 Sunset Blvd., MS#84, Los Angeles, CA 90027. Phone (213) 669-4110, Fax (213) 668-7823, Email: ydeclerck%smtpgate@chla.usc.edu**

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The Global Environment: Invitation for RITE Research Proposals

(1997 Entrusted Research)

Research Institute of Innovative Technology for the Earth (RITE) is inviting basic research proposals dealing with global environmental problems. Also, research proposals deemed to contribute significantly to the resolution of global environmental problems will be supported by RITE in the form of entrusted research.

1. Category of Research

Basic research aimed at the development of innovative technologies that will contribute to the solution of global environmental problems.

2. Themes of Research

[A] Research concerning carbon dioxide, methane, and other greenhouse gases considered to be the primary causes of global warming:

- 1) Efficient separation, recovery, disposal, re-use, etc. of greenhouse gases.
- 2) Innovative process technologies that limit greenhouse gas generation.
- 3) Research concerning enhancement of CO₂ sinks (eg, ocean sink, underground storage and reforestation through biotechnology).

[B] Research on other technologies concerning global environmental problems as follows:

- 1) Control of the generation and widespread release of chemical substances, apart from the greenhouse gases mentioned in [A], which are seriously detrimental to the environment, or prevention of generation of those substances.
- 2) Substitutes for the chemical substances mentioned above.
- 3) Recycling and effective utilization of materials.

3. Number of Research Proposals to be Accepted

The number of research proposals to be accepted will be determined after the governmental budget for FY 1997 has been confirmed. Thirteen new research proposals have been accepted for FY 1996.

4. Research Expenses for Entrusted Research

Up to 10 million Japanese yen will be allocated for each research proposal,

although the entire cost of the research proposal may not be covered by RITE. Research expenses distributed for the research proposals accepted in FY 1996 ranged from 5 million to 7 million Japanese yen per research proposal, with an average of 6.33 million yen.

5. Deadline for the Submission of Applications

Applications must be received by RITE no later than October 31, 1996.

***Attention: Applications received post deadline will be returned unprocessed.**

6. Period of the Entrusted Research

Period of the entrusted research will be from April 1997 to March 1998. If continuation is deemed necessary, however, RITE may entrust for the next year.

7. Qualified Research Participants

Individuals or groups engaged in research activities at research institutions, etc. are eligible. The applicants' citizenship or proposed site for the research will not be considered as criteria for selection.

8. Application Procedure

Applicants are asked to contact the RITE Secretariat (as below) for further information on documents to be submitted and the prescribed form thereof. Facsimile transmission is preferred for speed of communication. Please include relevant Tel. and Fax. numbers with requests.

Secretariat,
Mr. Y. Iki
Research Proposals Reception Section
Research Planning Department
RITE
9-2 Kizugawadai, Kizu-cho, Soraku-gun,
Kyoto, 619-02 JAPAN
TEL: +81-774-75-2302 FAX: +81-774-75-2314



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Headquartered in the beautiful San Francisco Bay Area, **Arris Pharmaceutical Corporation** is an innovative biopharmaceutical company using an integrated, team-oriented approach to drug discovery. Our primary focus is on the discovery & development of small molecule protease inhibitors. The expansion of our efforts in this area has created several exciting career opportunities for a select group of talented research professionals to actively participate in the discovery and development of new therapeutics.

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Pharmacology

We are seeking talented and motivated pharmacologists to evaluate the company's lead compounds in various animal models of infectious disease (antibacterial/antiviral), bone disorders, cancer, inflammation and immune-mediated diseases. Working closely with a team of medicinal chemists, enzymologists, biochemists and molecular biologists, you will apply state-of-the-art technologies to elucidate the disease correlation of novel molecular targets, and help to bring suitable drug candidates to the clinical development stage. Candidates for Scientist/Sr. Scientist level must possess a Ph.D. with 1-5 years of postdoctoral and/or pharmaceutical drug discovery experience in one or more of the above disease areas. Research Associates are expected to have a BS/MS degree with appropriate experience in animal pharmacology. (Job# SM0719-PAG)

Drug Metabolism/ Bioanalytical

We have several openings in the area of drug metabolism & bioanalytics to support our drug discovery programs directed towards the development of selective and potent inhibitors of several novel proteases. You will work closely with medicinal chemists and enzymologists to develop analytical methods for the detection and metabolic characterization of lead candidates. Familiarity with state-of-the-art analytical methods/instrumentation is a prerequisite. Scientists/Sr. Scientists must possess a Ph.D. in analytical chemistry, pharmacology or a related field and 3-5 years of pharmaceutical drug discovery/development experience. Research Associates should have a BS/MS along with appropriate research experience in drug metabolism and bioanalytical methods. (Job# SM0719-DMB)

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Equal Opportunity Employer.*

Cell Biology

We are seeking experienced cell biologists to evaluate the company's lead compounds in various *in vitro* models of infectious disease (antibacterial/antiviral), bone disorders, cancer, inflammation and immune-mediated diseases. Working closely with a team of medicinal chemists, enzymologists, biochemists and molecular biologists, you will characterize drug candidates in cellular systems. Candidates for Scientist/Sr. Scientist level must possess a Ph.D. with 1-5 years of postdoctoral and/or pharmaceutical drug discovery experience in one or more of the above disease areas. Research Associates are expected to have a BS/MS degree with appropriate cell biology experience. (Job# SM0719-CB)

Pharmacokinetics

We have open positions for skilled scientists with hands-on experience in designing and executing pharmacokinetic studies and animal models for ADME. You will work closely with pharmacologists, enzymologists and medicinal chemists towards the characterization and pharmacokinetic optimization of potential drug candidates. Scientists/Sr. Scientists must possess a Ph.D. and 3-5 years of pharmaceutical experience in drug discovery/development. Research Associates should have a BS/MS degree with appropriate experience in pharmacokinetics and pharmacology. (Job# SM0719-PAC)

Bioanalytical Mass Spectroscopy

We are seeking a scientist with a BS/MS degree and 5+ years of pharmaceutical experience in operating and maintaining a dedicated PE-Sciex tandem mass spectrometer. Experience with methods development and validation of low level LC/MS and LC/MS-MS assays of pharmacokinetic samples is preferred. Experience in the identification of drug metabolites and in the simultaneous detection and analysis of small libraries is desirable. (Job# SM0719-BMS)



University of Otago

Te Whare Wananga o Otago

New Zealand

PROFESSOR OF PHARMACOLOGY

Applications are invited from candidates with a strong record of research and academic leadership in pharmacology, which includes toxicology or clinical pharmacology, for the position of Professor and administrative Head of the Department. The current Head of Department, Professor R Lavery, retires on 31 January 1998; the successful applicant will be expected to either take up his/her duties from 1 February 1998, or at an earlier date to be negotiated.

The Department has a current establishment of five pharmacologists, two clinical pharmacologists and a toxicologist, plus the chair. Two of these positions are at present part-time. The Department is situated in the Adams Building of the Medical School, and is closely allied with the School of Pharmacy, the National Toxicology Group, and other departments of the School of Medical Sciences. The Department is responsible for the teaching of pharmacology and toxicology to pre-clinical and clinical medical students, and dental, pharmacy and science students at undergraduate and post-graduate levels.

Research strengths of the department are currently in areas of neuropharmacology, cardiovascular pharmacology and new drug development. Recent rapid growth in graduate student numbers provides an opportunity for research development into other areas. Research collaboration within the Division of Health Sciences, and with the Division of Sciences is encouraged.

Current salary ranges are as follows:

Professor (non-medically qualified) NZ\$ 82,000 - NZ\$102,000 per annum

Professor (medically qualified) NZ\$102,960 - NZ\$112,840 per annum

Enquiries may be directed initially to Professor R Lavery (phone 64-3-479 7265; fax 64-3-479 9140; email: dick.lavery@stonebow.otago.ac.nz). Information about the Department is available on the Web at: http://www.otago.ac.nz/Web_menus/Dept_Homepages/pcol/Pcolmain.html.

Reference Number A96/51. Closing Date 30 September 1996.

LECTURER/SENIOR LECTURER IN PHARMACOLOGY LECTURER/SENIOR LECTURER IN TOXICOLOGY

Two positions exist for candidates with advanced training and research experience in pharmacology or in toxicology, who are also enthusiastic researchers and teachers.

The position in toxicology is new, and the successful candidate will be required to develop an active research programme in toxicology, as well as assisting with further developing the present teaching programme, mainly to students undertaking Science degrees.

Through the close links with the staff of the National Toxicology Group, which comprises the National Poisons and Hazardous Chemicals Information Centre, and the Centre for Adverse Reactions to Medicines, the courses in toxicology currently offered have an emphasis on human toxicology. However, other fields such as basic mechanisms or environmental studies could be developed as areas of expertise.

The position in pharmacology requires a skilled pharmacologist with an enthusiasm and interest in student learning, and the ability to build an active research programme. It is intended that both these positions will be filled by the start of the academic year in February 1997. These positions may be confirmation path, ie confirmed after a probationary period, or limited term appointments, depending on the experience and interests of the candidates. It is likely that one position will be at a senior, and one at more junior level.

Current salary ranges are as follows:

Senior Lecturer (non-medically qualified) NZ\$54,250 - NZ\$64,250 per annum.

Senior Lecturer (medically qualified) NZ\$67,808 - NZ\$87,568 per annum.

Lecturer (non-medically qualified) NZ\$40,500 - NZ\$51,000 per annum.

Lecturer (medically qualified) NZ\$41,600 - NZ\$49,400 per annum.

Enquiries may be directed initially to Professor R Lavery (phone 64-3-479 7265; fax 64-3-479 9140; email: dick.lavery@stonebow.otago.ac.nz). Information about the Department is available on the Web at: http://www.otago.ac.nz/Web_menus/Dept_Homepages/pcol/Pcolmain.html.

Reference Number A96/52 (Pharmacology). Closing Date 16 August 1996.

Reference Number A96/53 (Toxicology). Closing Date 16 August 1996.

METHOD OF APPLICATION

Further details regarding these positions, the University and the application procedure are available from the Director, Personnel Services, University of Otago, PO Box 56, Dunedin, New Zealand (facsimile 64-3-474 1607 or e-mail laurie.hibbert@stonebow.otago.ac.nz).

Applicants should send two copies of their curriculum vitae together with the names, addresses and fax numbers of three referees, to the Director of Personnel Services by the specified closing date, quoting the appropriate reference number.

*Equal opportunity in employment is University policy.
E tautoko ana Te Whare Wananga o Otago i te kaupapa
whakaorite whiwhinga mahi.*

ASSOCIATE DEAN FOR BIOMEDICAL INFORMATION TECHNOLOGIES

Case Western Reserve University's School of Medicine invites applications for the position of Associate Dean for Biomedical Information Technologies. Reporting to the Dean of the School of Medicine, the Associate Dean will lead the faculty and students of the School of Medicine in the development of electronic technologies that strengthen the school's leadership in medical education and research. The overall goal of this office is to ensure that faculty and students use electronic media to enhance the effectiveness of the academic program and to provide necessary support and training for students and faculty for individual research and problem solving.

Qualifications: MD preferred with extensive background or degree in Biomedical Informatics and Computer Assisted Instruction strongly preferred. Successful applicant should have teaching experience in a major medical school and have knowledge of current trends in medical and computer technologies. Administrative and management experience is preferred. Salary will be commensurate with experience.

Letters of application (containing curriculum vitae and references) and nominations should be addressed to:

**Associate Dean for Biomedical
Information Technologies
Search Committee**

**Attn: Elizabeth Jaszczak
Department of Human Resources
Case Western Reserve University
10900 Euclid Avenue
Cleveland, OH 44106-7047**



In employment as in education, CWRU is committed to
Affirmative Action and Equal Opportunity.

Postdoctoral Fellowships

The UNC Lineberger Comprehensive Cancer Center of the University of North Carolina at Chapel Hill will have openings in 1996-97 in its training program, now in its 22nd year, for persons completing graduate studies to train with excellent investigators in basic research in tumor virology, molecular carcinogenesis, molecular therapeutics, cancer cell biology, genetics, tumor immunology and research that interfaces with clinical and physical sciences. Training is available in DNA repair, replication and mutagenesis; regulation of cellular proliferation and differentiation including growth factors, signal transduction pathways and intercellular communication; molecular immunology; molecular genetics and epidemiology of cancer; and human disease models and gene therapy. Unique training resources and core facilities are supported by the NCI-designated UNC Lineberger Comprehensive Cancer Center.

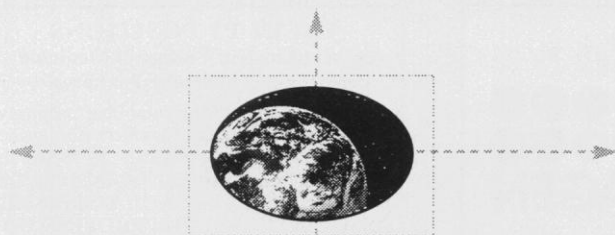
Preceptors are: Steven Bachenheimer, Albert Baldwin, Victoria Bautch, Keith Burrage, Sharon Campbell, Stephen Chaney, David Clemons, Edward Collins, Marila Cordeiro-Stone, Channing Der, Robert Duronio, H. Shelton Earp, Jeffrey Frelinger, Frank French, Jack Griffith, Stephen Haskill, Geoffrey Haughton, Brian Herman, Eng-Shang Huang, Clyde Hutchinson III, Kenneth Jacobson, Rudolph Juliano, David Kaufman, Shannon Kenney, Ryszard Kole, Steven Leadon, David Lee, Edison Liu, Patricia Maness-Tidwell, William Marzluff, Beverly Mitchell, Joseph Pagano, Nancy Raab-Traub, James Raleigh, R. Jude Samulski, Aziz Sancar, Ronald Swanstrom, Lishan Su, Jenny Ting, Ronald Thurman, Michael Topal, Terry Van Dyke, Jean-Michel Vos, Kevin Weeks, Bernard Weissman, Elizabeth Wilson, and Yue Xiong.

Candidates must be U.S. citizens or permanent residents. For an informational brochure or to apply (include curriculum vitae, three letters of recommendation, a statement of research interests and graduate school records) write to:

**Joseph S. Pagano, M.D.
CB#7295**

**UNC Lineberger Comprehensive Cancer Center
School of Medicine
University of North Carolina at Chapel Hill
Chapel Hill, NC 27599-7295**

UNC's Comprehensive Cancer Center is an Affirmative Action/Equal Opportunity Employer. Minority applicants are encouraged to voluntarily identify themselves.



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As a subsidiary of the Fortune 100 Monsanto Company, Ceregen is a world leader in the discovery and development of agricultural products based on advanced chemistry and biotechnology. Along with the opportunity to push our technologies and our products to the limits, we can offer the following:

RESEARCH SCIENTIST

Working with scientists with expertise in gene expression, plant development, plant growth regulators, plant transformation, molecular biology and biochemistry, you will research and develop products related to plant lipid metabolism. We require a Ph.D. with postdoctoral experience or a MS with extensive research experience in Biochemistry or a related discipline. Additional knowledge of enzymology, assay development, protein biochemistry, and hands-on experience with various biochemical analyses is a must. Knowledge of plant biology and physiology is a plus. (Job # RSSB)

PROTEIN BIOCHEMIST I

As part of our disease control team, you will provide expertise and experimental support to the discovery and development of novel proteins for plant disease control. We require a MS in Biochemistry or a related discipline along with 3+ years of laboratory experience and experience in protein purification from microbial and plant sources. Additional knowledge of protein assay development, protein characterization, protein sequence determination and antibody production is essential. You will also need experience operating HPLC, FPLC and other state-of-the-art equipment. Molecular biology experience is a plus. (Job # PB1)

PROTEIN BIOCHEMIST II

As part of our disease control team, you will provide expertise and experimental support to the discovery and development of novel proteins for plant disease control. We require a Ph.D. in Biochemistry or a related discipline along with 3 years of post-doctoral research experience including protein purification from microbial and plant sources. Additional knowledge of protein assay development, protein characterization, protein sequence determination and antibody production is essential. You will also need experience operating HPLC, FPLC and other state-of-the-art equipment. Molecular biology experience is a plus. (Job # PB2)

Along with a chance to explore the cutting-edge, Ceregen offers competitive salaries and comprehensive benefits. For consideration, please send a resume, indicating job #, to: **Monsanto, Human Resources, Attn: LMH, Job # _____, Mail Zone C2NB, St. Louis, MO 63167.** An Equal Opportunity Employer.



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SCIENTIFIC DISCOVERY

San Francisco Bay Area

Athena Neurosciences, Inc. is a growing biotechnology-based company committed to the discovery and development of new products to diagnose and treat diseases of the central nervous system. We have excellent opportunities for experienced professionals in our South San Francisco facility.

Formulation Scientist

- Pharmacology -

You will serve as a resource for our Pharmacology Department and assist with pre-clinical formulation research. You will also support our ongoing synthetic chemistry efforts by providing bio-analytical support for log P & pKa determinations. Candidates must possess a pharmacy or pharmacology degree, or equivalent (Masters preferred); at least 4 years of hands-on pharmaceutical laboratory experience (industry preferred); a high degree of expertise measuring solubility, LogP & pKa, physical forms of test compounds (particle size & crystallinity); and drug stability; demonstrated experience using non aqueous solvent systems (Tween, Cyclodextrin, etc.) and surfactants & co-solvents; familiarity with USP formulations; and proficiency with analytical HPLC. (Job# SCI719-FS)

Experimental Pharmacologist

- Pharmacology -

We are seeking an in vivo CNS pharmacologist with a Ph.D. and at least 4 years of experience within the pharmaceutical industry. Ideal candidates will be familiar with experimental models of neurological diseases (e.g. Alzheimer's, Multiple Sclerosis, Parkinson's) and have extensive experience within drug discovery programs. The ability to be part of a multidisciplinary team of pharmacologists, medicinal chemistry and neurobiologists is essential. A working knowledge of surgical techniques and animal models of inflammation would be an advantage. (Job# SCI719-EP)

Scientist

- Medicinal Chemistry -

You will be responsible for the design, synthesis, purification and isolation of novel organic compounds for pharmacological evaluation. The position requires a Ph.D. in synthetic organic chemistry and experience in broad areas of organic synthesis. Qualified candidates must have a strong desire to excel and the potential to make substantial contributions in breakthrough areas of drug research. The ability to interact effectively with our multidisciplinary team of scientists is essential. 1-3 years of directly relevant postdoctoral study or equivalent industrial experience is preferred. (Job# SCI719-SCI)

Research Assistant/Associate

- Medicinal Chemistry -

The successful candidate will be responsible for synthesis, purification, and structural identification of chemical intermediates and target compounds required for drug discovery screens. The position requires a BA/BS in chemistry and 0-5 years' related experience, or a MS and 0-2 years' experience. Qualified candidates must possess experience with routine organic chemistry synthesis techniques, chemical purification (chromatography, crystallization), and compound identification (NMR, IR, mass spectrometry). Must be able to work effectively as part of a research team and possess excellent written/verbal communication skills. (Job# SCI719-RA)

Athena offers an innovative and exciting professional, scientific environment in addition to competitive salaries and benefits. Please send resume to: **Athena Neurosciences, Inc., Human Resources, (Attn: Job#), 800 Gateway Blvd., South San Francisco, CA 94080.** EOE



Join the QIAGEN Team

Take advantage of expanding opportunities in the molecular research markets! QIAGEN, the world wide leader in nucleic acid purification, is seeking highly motivated and talented individuals to join our team. QIAGEN is committed to providing high quality, innovative purification products to the molecular biology and molecular diagnostic research communities.

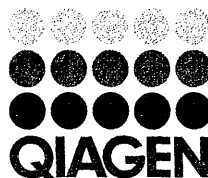
Technical Service Manager: Responsibilities include training, supervision, and evaluation of BS/MS/PhD level specialists in providing technical support for QIAGEN's product line. Also responsible for technical training of all QIAGEN employees and giving public seminars on QIAGEN products. Qualifications must include a PhD/MS in molecular biology or related discipline, postdoctoral research experience or molecular biology lab experience equivalent to five years, and at least two years of management experience preferred. Outstanding communication skills including presentation and writing skills required (Reference TSM-0796).

Product Manager: Responsibilities include market conceptualization, coordinating product launches, contacting customers, and supporting the sales team. Knowledge of PCR products required. Thirty percent travel is typical. Prior marketing/sales experience and outstanding communication skills are required. MS/BS degree and two years of lab experience in molecular biology or related fields (Reference PM-0796).

Associate Product Manager—Molecular Biology: Responsibilities include assisting in market conceptualization, coordinating product launches, contacting customers, and supporting the sales team. Knowledge of a variety of molecular biology techniques, particularly plasmid purification, and/or two years of sales or marketing experience is required. Outstanding communication skills are also required. Thirty percent travel is typical. Applicants should have an MS/BS degree in a molecular biology related field (Reference APM/MB-0796)

QIAGEN offers a competitive compensation package.

Please send résumé to: **Human Resources, (Reference #), QIAGEN Inc., 9600 De Soto Ave., Chatsworth, CA 91311.**



FACULTY POSITIONS

**Albert Einstein College of Medicine
Department of Molecular Pharmacology**

The Department of Molecular Pharmacology is seeking new faculty members during the period of August/September 1996-March 1997. Candidates are invited to apply for positions at all academic levels (**ASSISTANT, ASSOCIATE and FULL PROFESSOR**). All positions offer the opportunity for tenure. We are seeking individuals with a record of excellence in research who will apply skills in biochemistry, molecular biology, and cell biology to solve problems relevant to molecular pharmacology. Essential requirements are an innovative research program that complements programs within the Department and the Medical School, and a commitment to the training of fellows and graduate students. Research areas of interest to the Department include: mechanisms of drug, hormone, oncogene, growth factor, and neurotransmitter actions; structure, function, and regulation of receptors, regulatory enzymes, and transporters; signal transduction, second messengers, and protein phosphorylation; post-translational modification and intracellular targeting. Substantial packages will be provided to start up and sustain the laboratories of successful candidates. Submit two copies of a curriculum vitae, a statement of research interests, future plans, and names of three references to **Dr. Charles S. Rubin or Dr. Susan B. Horwitz, c/o Ms. Anna Cioffi, Administrator, Department of Molecular Pharmacology, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461.**

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Assay Research Scientists BE AT THE FOREFRONT!

Vysis, Inc. is a leader in the development of nucleic acid probes, hybridization reagents and advanced computer imaging systems for the study of genetic diseases—with a rapidly expanding product catalog and sales base. Currently, we have open positions for scientists in our Product Development, Advanced Technology, and Technical Service groups. Vysis is located in Downers Grove, Illinois, a southwest suburb of Chicago.

We are looking for two creative and highly motivated Ph.D. bench scientists, with 2-5 years post graduate experience in Developmental Biology, Cell Biology, Biochemistry, or Molecular Biology, to devise and develop rapid, highly sensitive molecular diagnostic assays for human genetic disease. One scientist will concentrate on rare event detection and development of expressions assays, and will require expertise in immunohistochemistry and in situ hybridization. The other scientist will concentrate on multi-analyte analysis of single cells and will require expertise in non-isotopic nucleic acid labeling and DNA/RNA hybridization. Experience with amplification technologies, high sensitivity detection methodologies, enzymology, immunoassays, and DNA assays is desirable.

Respond by submitting a cover letter, curriculum vitae and salary history to the following address:



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Human Resources Director
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Downers Grove,
Illinois 60515
or fax to: (708) 271-7008

Visit us on the Internet @ www.vysis.com

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POSTDOCTORAL POSITION

POSTDOCTORAL POSITION, with NIH funding, available immediately to study protein sorting in the endocytic pathway and antigen presentation by MHC class II molecules. Projects focus on (1) understanding how sorting signals function and (2) utilizing sorting signals to improve antigen processing. Experience in molecular biology, cell biology, tissue culture, and immunochemical techniques is desirable. Applicants should send a curriculum vitae, a statement of research interests, and a list of three references to: **Michael Marks, Ph.D., Department of Pathology and Laboratory Medicine, University of Pennsylvania, 277 John Morgan Building, Philadelphia, PA 19104-6082. Telephone: (215) 898-3204; FAX: (215) 898-4227; Email: marks@med.upenn.edu.** The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.



PROFESSOR OF MEDICINE

Harvard Medical School, Dana-Farber Cancer Institute and the Department of Medicine of Brigham & Women's Hospital seek a candidate to serve as Chief of the Department of Medical Oncology at DFCI and simultaneously as Chief of the Division of Medical Oncology in the Department of Medicine at BWH.

*Please send CV to
**Dr. David Nathan, DFCI,
44 Binney St.,
Boston, MA 02115.
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Opportunity Employer.***

HARVARD MEDICAL SCHOOL



**NIH Postdoctoral Position—AIDS Research
HIV Env/CD4 Interactions, Fusion Cofactors, Tropism**

Projects: 1) Identification of cofactors on CD4+ cells required for HIV fusion and entry [*Virology* (1993) **193**:483; *Science* (1994) **264**:1156]; role of fusion cofactors in tropism of HIV and SIV for different CD4-positive cell types [*PNAS* (1995) **92**:9004; *J. Virol.* (1996) **70**:5487]. These studies make use of a novel reporter gene assay for fusion [*J. Virol.* (1994) **68**:5411]. We recently cloned a cDNA encoding a putative chemokine receptor that functions as a fusion cofactor for T-cell line-tropic HIV-1 strains [*Science* (1996) **272**:872]; we also identified a distinct chemokine receptor as a fusion cofactor for macrophage-tropic strains [*Science* (1996) **272**:1955]. 2) Structure/function analysis of env/CD4/cofactor interactions and CD4-induced conformational changes [*J. Virol.* (1993) **67**:913]. 3) Analysis of role of fusion cofactors in pathogenesis and transmission. 4) Design of novel AIDS therapeutics and screening methods based on env/CD4/cofactor interactions. 5) Paramyxovirus glycoprotein/receptor interactions and fusion mechanisms [*J. Virol.* (1995) **69**:3341].

Experimental approaches include expression of recombinant proteins (emphasis on vaccinia virus vectors); biochemical, genetic, and immunochemical analyses of fusion reactions; development of novel functional cDNA library screening methods.

Position available immediately (August 1996); later starting dates considered. Experience in molecular biology, protein chemistry, immunology, membrane biochemistry, or virology strongly preferred. Send CV and names of three references to:

Edward A. Berger, Ph.D.

**Chief, Molecular Structure Section
Laboratory of Viral Diseases, NIAID
Bldg. 4, Rm. 236**

**National Institutes of Health
Bethesda, MD 20892**

Phone: (301) 402-2481, FAX: (301) 480-1147

email: edward_berger@nih.gov

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GLOBAL CAREER OPPORTUNITIES

Postdoctoral Fellow

**Division of Entomology,
Canberra, Australia**



**Entomopoxvirus *in vitro* protein
expression system**

A\$40K - A\$45K + Superannuation

We are seeking a person with experience in molecular virology and an interest in strategic aspects of biotechnology to undertake research into the development of an entomopoxvirus-based *in vitro* protein expression system. The position is the inaugural CSIRO Division of Entomology Postdoctoral Fellowship and is available for a two year period. The appointee will be located in Canberra and must commence work in calendar year 1996.

You will need a PhD or equivalent with research experience in the production and characterisation of recombinant viruses and skills in purification, characterisation and assessment of biological activity of proteins, and general techniques of molecular biology.

For further information contact Dr David Dall on 61 6 246 4117 or email davidd@ento.csiro.au for further details on the position. An Information Package can be obtained by telephoning 61 6 246 4014.

International enquiries and applications may be faxed to 61 6 246 4068.

Your application should include details of your skills, qualifications and work achievements, and the names of at least three professional referees. You should quote position number **M0595** and address your application to: **The Recruitment Officer, CSIRO Division of Entomology, GPO Box 1700, Canberra ACT 2601 Australia** by August 16, 1996.



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Inex Pharmaceuticals Corporation is an innovative leader in the development of systems for the targeted delivery of biologically active agents *in vivo*. This includes the intracellular delivery of antisense oligonucleotides and DNA vectors. Gene therapy is the central focus of the company. Applicants are invited for the following positions:

Section Leader—Immunology

A supervisory position requiring an accomplished scientific leader to set up the Immunology Group. Ph.D. and at least 4 years of research/industrial experience in the field of Immunology, Microbiology, Biochemistry, Cell Biology, or Virology. A strong publication record, excellent communication skills, and proven supervisory and project management abilities are essential. This position will focus on the development of humoral and cellular immune assays, *in vivo* immune mechanisms, and animal models of immune induction. Candidates with experience in gene therapy applications and/or vaccine development are encouraged to apply.

Research Scientist—Tumour/Cell Biologist

We are seeking an individual with 0-5 years of postdoctoral research/industrial experience with an interest in developing targeted carrier systems for the delivery of anti-cancer drugs or DNA. Experience with animal models is an asset. Working knowledge in the following areas would be an asset: cell biology, tumour biology, pharmacology. We are looking for an innovator and a team player interested in working in a highly productive team environment.

Research Scientist—Molecular Biology

The person appointed will have at least 2 years of postdoctoral research/industrial experience in viral gene expression and replication, development of model assay systems, and viral structure-function knowledge. Must be an RNA or DNA virus expert. Experience with recombinant protein production an asset. Must have excellent presentation skills and ability to interact within highly productive team environment.

Research Scientist—Cell Biologist

The person appointed will have 0-4 years of postdoctoral experience in cell biology with an emphasis on intracellular trafficking of nucleic acids. Experience in one or more of the following areas: nuclear import/export of nuclear proteins, RNA; gene transfer; virology: viral mechanism of nuclear targeting. Knowledge of molecular biology and/or biochemistry of nuclear pore complexes an asset.

Research Scientist

The person appointed will have 0-4 years of postdoctoral experience in cell biology, biochemistry, or immunology. Experience in one or more of the following areas: signal transduction, oncogenes, tumor biology, antisense, ribozymes. Experience with cancer biology or cell adhesion molecules would be an asset.

Interested applicants should send resumes to:

Human Resource Manager, Inex Pharmaceuticals Corporation, 1779 West 75th Avenue, Vancouver, British Columbia, V6P 6P2 Canada, or fax: 604-264-9690 or email: yaroshev@inexpharm.com

We thank all for their interest; only candidates considered for interviews will be contacted.

POSITIONS OPEN

DIRECTOR OF ANIMAL RESOURCES

The University of Chicago invites applications for a **FACULTY POSITION** as Director of the Animal Resources Center. The Center is responsible for the care and housing of laboratory animals used at the University, and is currently supported by seven faculty veterinarians and a staff of 65. The University supports over 600 animal research protocols, funded by greater than \$45,000,000 annually. Facilities encompass approximately 90,000 square feet, with a census of approximately 25,000 animals. The Animal Resources Center is the service arm of the Committee on Comparative Medicine and Pathology, an academic unit whose mission also includes research and teaching. The successful candidate will be expected to contribute to teaching and/or training programs, and will be encouraged to pursue independent or collaborative research. The successful candidate should hold a D.V.M. degree or equivalent and be Board-certified in Laboratory Animal Medicine. Applicants who are Board-certified in Pathology, Internal Medicine, or another relevant specialty will also be considered. The individual should have experience in the management of an animal resource facility, be familiar with standards for AAALAC accreditation and regulatory compliance issues, and have experience with facility design and renovations. This is an excellent opportunity for an academically oriented individual to direct a dynamic and growing animal resource program at a major research university. Academic rank and salary will be commensurate with credentials and experience. Interested candidates should submit a curriculum vitae, letter of interest, and three letters of reference to: **Dr. Paul Schumacker, Chairman, Committee on Comparative Medicine and Pathology, The University of Chicago, 5841 South Maryland Avenue, MC1030, Chicago, IL 60637.** *Affirmative Action/Equal Opportunity Employer.*

The Radiation Biology Branch, National Cancer Institute (NCI), National Institutes of Health, is accepting applications for a **TENURE-TRACK** position involving preclinical and mechanistic studies evaluating the effects of oxidants, such as superoxide, hydrogen peroxide, nitric oxide, oxygen-related radicals, ionizing radiation, and redox-active chemotherapy drugs, on the modulation of tumor and normal tissue physiology and cytotoxicity. The emphasis of the position will be to develop approaches that could potentially lead to therapeutic gains in cancer treatment and an understanding of the mechanism(s) of action that oxidative stress can exert at the biochemical, cellular, and physiologic level. Candidates should have strong research credentials and should have a publication record in leading international journals in research areas related to oxidative stress, radiation biology, and/or cancer biology. Likewise, experience and/or a basic understanding of advanced analytical chemical and biochemical techniques, cell biology, radiation biology, and general concepts of molecular biology is desirable. The salary range for this position is \$49,856 to \$68,729 per annum, which is equivalent to a GS-13 in the Civil Service. Applicants should send curriculum vitae, bibliography, selected publications, and a brief statement of research interest and have three letters of reference sent to: **Marie Priest, Division of Clinical Sciences, National Cancer Institute, Building 31, Room 3A11, 31 Center Drive MSC 2440, Bethesda, MD 20892-2440.** This information must be received no later than August 30, 1996. *The NCI is an Equal Opportunity Employer.*

Molecular Oncologist: The Ohio State University Department of Pediatrics located at Children's Hospital, Columbus, Ohio, is seeking M.D., Ph.D., or M.D.-Ph.D. candidates eligible for appointment in the Division of Hematology/Oncology at the **ASSISTANT, ASSOCIATE, or FULL PROFESSOR** level on regular tenure track. The position will have an emphasis in molecular oncology with graduate teaching and/or clinical responsibility in pediatric hematology/oncology. The candidate should have expertise in pediatric solid tumors, oncogenes and growth factors, or transgenic animals. The candidate will be expected to spend the majority of his or her time in basic research that includes publication in peer-reviewed journals and stressful application for extramural grants. Address correspondence with references and curriculum vitae to: **M. Sue O'Dorisio, M.D., Ph.D., Professor and Chair of the Hematology/Oncology Search Committee, Children's Hospital, 700 Children's Drive, Columbus, OH 43205. Telephone: 614-722-2775.** *The Ohio State University is an Equal Opportunity/Affirmative Action Employer. Qualified women, minorities, Vietnam-era veterans, and disabled persons are encouraged to apply.*

POSITIONS OPEN

DIRECTOR OF VECTOR CORE Institute for Human Gene Therapy University of Pennsylvania Health System

Manage a research laboratory that develops vectors and services the research community. Ph.D. in virology or molecular biology with proven management skills required. Hired as senior staff with adjunct faculty appointment.

Interested applicants should forward cover letter and curriculum vitae to:

James M. Wilson, M.D., Ph.D.
Director
Institute for Human Gene Therapy
Wistar Institute, Room 204
3601 Spruce Street
Philadelphia, PA 19104-4268
Affirmative Action/Equal Opportunity Employer

MOLECULAR BIOLOGIST

The Department of Experimental Radiation Oncology at the University of Texas M. D. Anderson Cancer Center is accepting applications for a faculty position at the **ASSISTANT/ASSOCIATE PROFESSOR** level. We are seeking a scientist with a record of independent research emphasizing molecular aspects related to radiation biology/oncology. Interested applicants should send a description of research interests, curriculum vitae, and the names of at least three references to: **Luka Milas, M.D., Ph.D., Professor and Chairman, Department of Experimental Radiation Oncology, Box 66, U. T. M. D. Anderson Cancer Center, 1515 Holcombe Boulevard, Houston, TX 77030.**

The University of Texas M. D. Anderson Cancer Center is an Equal Opportunity/Affirmative Action Employer. Smoke-free environment. Women in minority categories are encouraged to apply.

SENIOR FACULTY POSITION MOLECULAR BIOLOGY/BIOCHEMISTRY

The Department of Chemistry, Biochemistry, and Molecular Biology of the Oregon Graduate Institute of Science and Technology seeks to hire a molecular biologist/biochemist at the **FULL or ASSOCIATE PROFESSOR** level. Persons with a proven record of scientific accomplishment and solid research funding are encouraged to apply. A description of departmental research interests can be found at <http://www.cbs.ogi.edu/>. Send curriculum vitae, names of three references, and a summary of research plans to: **Dr. James M. Cregg, Search Committee Chair, Oregon Graduate Institute, P.O. Box 91000, Portland, OR 97291-1000 U.S.A. Telephone: 503-690-1217; FAX: 503-690-1464; Email: cregg@admin.ogi.edu, by September 1, 1996.** *Equal Employment Opportunity/Affirmative Action Employer.*

FACULTY POSITION MOLECULAR PHARMACOLOGY

The Department of Pharmacology, University of Missouri-Columbia, invites applications for a tenure-track position at the **ASSISTANT or ASSOCIATE PROFESSOR** level, focusing on the application of molecular biology to analysis of significant problems in pharmacology. Research areas of interest include but are not limited to: structure, function and regulation of receptors, membrane transport proteins, and ion channels; molecular mechanisms of transmembrane signaling; and neurotransmitters and growth factors. Successful candidates are expected not only to have a strong record of research accomplishments but also to participate in the teaching of medical and graduate students. Please send curriculum vitae, a brief description of research plans, and the names of three references to: **Dr. Hyun Dju Kim, Professor and Chairman, Department of Pharmacology, University of Missouri-Columbia, School of Medicine, M517B Medical Sciences Building, Columbia, MO 65212.** *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH SCIENTIST

Ecogen Inc., an agricultural biotechnology company located in Langhorne, Pennsylvania, has an immediate opening for a **RESEARCH SCIENTIST** skilled in insect physiology and biochemistry. Candidates must have a Ph.D. degree in the appropriate discipline. Postdoctoral experience preferred. Please send your résumé and salary history to: **Ecogen Inc., Reference Number 96-13, P.O. Box 3023, Langhorne, PA 19047-3023.** *Equal Opportunity Employer.*

POSITIONS OPEN

AQUATIC ECOLOGY ASSISTANT OR ASSOCIATE SCIENTIST

**J. W. Jones Ecological Research Center
Newton, Georgia**

The J. W. Jones Ecological Research Center located in southwest Georgia invites applications for the position of **ASSISTANT or ASSOCIATE SCIENTIST** in Aquatic Ecology. The individual will be expected to develop a field-oriented research program in coastal plain wetlands and riverine ecosystems. Those studying the contribution of microbial, biogeochemical, hydrologic, or geomorphic processes to aquatic ecosystems are encouraged to apply. Responsibilities include research (60% to 70%) and education (30% to 40%). Qualifications include a Ph.D. in ecology, biological sciences, water resources, or related field. Preference will be given to candidates with postdoctoral experience, strong communication skills, experience with acquiring extramural grants, and research experience combining both basic and applied perspectives.

Compensation package is competitive and commensurate with experience. An application letter, résumé, and names of three references should be mailed by September 20, 1996 to: **Dr. Stephen W. Golladay, Search Committee Chair, Jones Ecological Research Center, Route 2 Box 2324, Newton, GA 31770.** *The J. W. Jones Ecological Research Center is an Equal Opportunity Employer.*

FACULTY POSITION Division of Basic Sciences

Fred Hutchinson Cancer Research Center

The Division of Basic Sciences of the Fred Hutchinson Cancer Research Center (FHCRC) is soliciting applications to fill an open faculty position at the **JUNIOR FACULTY** level. Applicants with outstanding accomplishments in any field of molecular, cellular, and/or developmental biology will be considered. Candidates should send a curriculum vitae, a concise statement of their research plans, and three letters of reference to:

**Faculty Search Committee
Fred Hutchinson Cancer Research Center
Division of Basic Sciences
Mailstop: B1-030
1124 Columbia Street
Seattle, WA 98104**

Application deadline: October 31, 1996.

FHCRC is an Equal Opportunity Employer committed to workforce diversity.

PEDIATRIC PHYSICIAN SCIENTISTS

The University of Kentucky College of Medicine is interested in recruiting pediatricians (M.D. or M.D., Ph.D.) who are committed to laboratory investigations in areas of cancer, genetic and metabolic diseases, neuroscience, heart diseases, or other disorders related to neonatal and child health. Clinical area of interest should be related to one of the above subspecialty disciplines or in neonatology or critical care. Laboratory space, protected time, joint clinical/basic science appointments, collaboration or mentorship by senior investigators, and substantial intramural funding is available. Junior investigators with potential for extramural funding or senior investigators with active funding are encouraged to apply. Interactions with other faculty in clinical/basic science departments as well as the Sanders-Brown Center for Aging, Markey Cancer Center, School of Biological Sciences, and College of Agriculture provide a particularly stimulating research environment. *Permanent visa/citizenship required.* Interested individuals should send curriculum vitae and statement of past experience and future plans to: **V. Mankad, Chairman, Department of Pediatrics, University of Kentucky Medical Center, 800 Rose Street, Lexington, KY 40536-0284.**

CHIEF SCIENTIFIC OFFICER

Northwest NeuroLogic, a growing startup biotechnology company located in Portland, Oregon, is seeking an energetic, hands-on **CHIEF SCIENTIFIC OFFICER** to manage drug discovery programs involving neurotransmitter transporters and G-protein linked receptors. Candidates should have a Ph.D. and a strong background in molecular pharmacology. Ten years of experience is required; pharmaceutical or biotechnology industry background is a plus. Qualified candidates should also have strong communication and presentation skills as well as experience in strategic planning and new product development. Some travel required and salary is commensurate with experience. Please send curriculum vitae to: **Dr. Paul Woloshin, Northwest NeuroLogic, Inc., 2611 SW Third Avenue, Suite 200, Portland, OR 97201.**

Acusphere Inc. is a rapidly growing and well funded biotechnology company engaged in the research, development and commercialization of contrast imaging agents. We are currently seeking several professionals to join our Development Group.

Senior Scientist Analytical Chemistry

Will lead a team of scientists responsible for developing and validating methods for the characterization of contrast imaging agents as well as developing assays for in process control and validation of manufacturing processes. You will review and interpret data that will support regulatory filings such as INDs and NDAs. Strong communication skills are required. Must have a Ph.D. in Chemistry or Analytical Chemistry with a minimum of 2-4 years' experience in the pharmaceutical or biotechnology industry and a strong background in GC, HPLC, and Spectroscopy.

Drug Metabolism and Pharmacokinetics Scientist

Primary responsibilities will include the design, analysis, and reporting of all pharmacokinetic, pharmacology, and toxicology studies for regulatory purposes. You will design and implement ADME studies in animals, monitor studies conducted at contract laboratories, handle the selection and auditing of the contract facilities, and advise on the correlation of preclinical studies and clinical design. Strong oral and written communication skills are required. Must have a Ph.D. in Pharmacokinetics, Pharmacology, Toxicology or a D.V.M. with at least 2-4 years' experience in the pharmaceutical or biotechnology industry.

Acusphere Inc. offers a stimulating work environment as well as a competitive salary and an excellent benefits package including equity participation. Please send your resume to: Acusphere Inc., Attn: HR, 38 Sidney Street, Cambridge, MA 02139. An Equal Opportunity Employer M/F/D/V.

ACUSPHERE inc.

Scientist Positions

Immusol Inc., located in the coastal city of San Diego and strategically positioned in one of the country's top bioscience research communities, is a fast growing biotech company. We are best known for our leading position in the development of ribozyme gene therapy for the treatment of human diseases including HIV infection.

Several positions for research scientists and research associates are available for our new research programs. The former positions require a Ph.D. degree plus several years of research experience in Molecular Biology and/or Virology. We are looking for team players with a creative scientific mind and an enthusiastic working attitude. Experience in catalytic RNA is highly desirable. We offer an attractive compensation package including stock options. Please send a letter of interest describing how you meet these qualifications and your resume with a list of three references to:

Human Resources

Immusol, Inc.

3050 Science Park Road

San Diego, CA 92121



ANNOUNCEMENT



1996-'97

AAAS Award for Public Understanding of Science and Technology

Nominations Invited

- An annual Award for working scientists and engineers from all disciplines who make outstanding contributions to public understanding of science and technology but are *not* members of the media.
- Contributions should have a significant impact on the public; be accurate, timely, and innovative; and convey the meaning, excitement, and significance of scientific activity.
- The Award will be presented during the AAAS Annual Meeting in Seattle, WA, February 13-18, 1997.
- The Award carries a \$5,000 prize.

1995 Award Winner: Carl Sagan

For additional information, contact: Amie King, Project Director, American Association for the Advancement of Science, 1200 New York Avenue, NW, Washington, DC 20005, telephone (202) 326-6667, or fax (202) 371-9849.

Deadline for nominations is August 1, 1996.

SYMPOSIUM

SUSCEPTIBILITY AND RISK ASSESSMENT

The Third Annual Symposium of the National Health & Environmental Effects Research Laboratory

The National Health & Environmental Effects Research Laboratory (NHEERL) of the U.S. Environmental Protection Agency is pleased to announce that its Third Annual Symposium will be held September 24-27, 1996 at the Omni Durham Hotel and Durham Civic Center in Durham, North Carolina. This third in the Annual NHEERL Symposium Series on Research Advances in Health Risk Assessment will focus on known factors affecting the susceptibility of humans, experimental animal models, or cell tests systems to environmental toxicants with the goal of refining risk assessment strategies which must consider variable population response. Protection of the "susceptible individual" is a fundamental goal of environmental regulation. Indeed, it is generally accepted that if the susceptible individual is protected then the entire population will be protected. The format of the NHEERL Symposium will include invited platform presentations and contributed poster presentations. For more information, please contact:

1996 NHEERL Symposium
Susceptibility and Risk Assessment
c/o NHEERL Conference Coordinator
U.S. EPA

NHEERL, MD-70
Research Triangle Park, NC 27711

Phone: (919) 541-5193

Fax: (919) 541-4002

Internet: MEETING\$MAIL@HERL45.HERLEPA.GOV

POSITIONS OPEN

ASSISTANT OR ASSOCIATE PROFESSOR

The Department of Physiology and Pharmacology, School of Medicine, Oregon Health Sciences University (OHSU), invites applications for a full-time **TENURE-TRACK** position at the rank of Assistant or Associate Professor. The department will hire the most competitive individual based on his or her research program and letters of reference, but would prefer someone with training and experience in state-of-the-art research in pharmacology. The principal research interests in the department are the physiology, pharmacology, and toxicology of the cardiovascular, nervous, and reproductive systems. The successful candidate will be expected to participate in the education of medical and graduate students and to teach cardiovascular pharmacology.

Candidates holding a doctoral degree in a relevant discipline should apply by sending a letter of interest, a statement of research interests and teaching experience, curriculum vitae, and the names and addresses of three professional references to: **Dr. George D. Olsen, Chair of Search Committee, Department of Physiology and Pharmacology, L221, The Oregon Health Sciences University, 3181 S.W. Sam Jackson Park Road, Portland, OR 97201-3098.** Application deadline is October 15, 1996. *OHSU is an Affirmative Action/Equal Opportunity Employer.*

The Department of Cancer Biology/Comprehensive Cancer Center of Wake Forest University seeks candidates for two **TENURE-TRACK FACULTY** positions. A senior faculty position is available for an experienced, funded gene therapy researcher with a Ph.D. or M.D. A junior position is available for a Ph.D. or M.D. investigator with an outstanding track record in cancer gene therapy research and the potential to obtain extramural funding. Attractive start-up funds, lab space, and a collaborative environment for translational research are available. Send curriculum vitae, statement of research interests, funding history, and three letters of recommendation to: **Frank M. Torti, M.D., Director and Chairman, Department of Cancer Biology, Comprehensive Cancer Center, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem, NC 27157.** *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS TOXICOLOGY

POSTDOCTORAL POSITIONS funded by NIH Training Grant are available in molecular and cellular toxicology. This multidisciplinary training program covers a broad area of pharmacology, toxicology, and developmental biology. Specific areas of training include molecular and cellular neurotoxicology, molecular biology and patch clamp of neuroreceptors/ion channels, cell proliferation and differentiation, molecular mechanisms of cancer induction, tissue specific gene expression, and signal transduction. Qualified candidates must have a Ph.D., M.D., or equivalent. Send a letter expressing specific interest and curriculum vitae to: **Dr. Toshio Narahashi, Department of Molecular Pharmacology and Biological Chemistry, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611-3008.** Telephone: 312-503-8284; FAX: 312-503-1700; Email: tna597@anima.nums.nwu.edu. *Northwestern University is an Affirmative Action/Equal Opportunity Educator and Employer. Minorities are encouraged to apply.*

POSTDOCTORAL FELLOW

Applications are invited for an immediate **POSTDOCTORAL FELLOWSHIP** to study hematopoietic stem cell genetics. Candidate with a Ph.D. degree in biochemistry, genetics, or molecular biology are preferred. Please submit a curriculum vitae and the names of three references to: **Michael F. Clarke, M.D., University of Michigan Medical School, Department of Internal Medicine and Molecular and Cellular Biology, 1150 West Medical Center Drive, MSRB II, Room C570A, Ann Arbor, MI 48109-0668.** FAX: 313-763-4226. *An Affirmative Action/Equal Opportunity Employer.*

A **POSTDOCTORAL POSITION** is available immediately for a motivated researcher interested in the role of chromatin structure in yeast gene regulation using biochemical and molecular genetic approaches. Send applications with curriculum vitae, three letters of reference, and a description of research experience and interests to: **Paul Laybourn, Department of Biochemistry and Molecular Biology, Colorado State University, Fort Collins, CO 80523-1870.** FAX: 970-491-0494; Email: playbourn@vines.colostate.edu.

POSITIONS OPEN

RESEARCH PLANT PATHOLOGIST

USDA, Agricultural Research Service (ARS), Wheat, Sorghum and Forage Research Unit, Lincoln, Nebraska, is seeking a permanent, full-time (40 hours per week) Research Plant Pathologist, GS-13 (promotion potential GS-14), salary range \$51,915 to \$67,491 per annum. The incumbent is the **LEAD SCIENTIST** of a CRIS project that conducts basic and applied research on reducing economic losses of wheat to diseases caused by viruses and other pathogens. The incumbent also conducts cooperative research with plant geneticists to develop wheats with genetic resistance or tolerance to virus diseases. Use traditional and molecular approaches to develop effective screening methods to evaluate wheat germplasm for resistance to viruses. Utilize this technology with geneticists and breeders in cooperative studies on the development, evaluation, and release of wheats with improved virus resistance. Participate with entomologists on cooperative studies on the interactions of insect vectors, viruses, and host plants. Supervise and participate in the development of molecular approaches and gene constructs that, via plant transformation, can provide resistance to major diseases. The incumbent supervises research associates, technicians, and other assigned support personnel of the project. All candidates must have a degree in plant pathology or a related scientific discipline that included at least 20 semester hours in basic botany or plant science, and 10 semester hours in plant pathology and one year of specialized experience that demonstrates: 1) knowledge of traditional plant pathology with additional training in molecular virology; 2) knowledge of virus/vector interactions and/or virus/host interactions; 3) knowledge of plant improvement via plant genetics and breeding, and 4) skill in research project leadership. A Ph.D. is highly desirable. Laboratory is housed in the Department of Plant Pathology, University of Nebraska-Lincoln. For application package call **Barbara Dailey, Telephone: 402-472-9691.** Incomplete applications will not be accepted. Applications must be marked ARS-D6W-111 and postmarked by August 15, 1996. Obtain a copy of the announcement in order to answer specific Selective Placement Factors. Applications may be in the form of a résumé, curriculum vitae, or OF-612 (SF-171 would be accepted, but not required). *U.S. citizenship is required. USDA/ARS is an Equal Opportunity Employer.*

PRINCIPAL SCIENTIST PLATELET BIOLOGY

Accumetrics is a medical diagnostic company developing innovative disease management tools for the cardiovascular market. We are seeking an outstanding Ph.D.-level cell biologist or biochemist with at least five years of experience in platelet biology and assay development to play a key role in the development of a novel platelet function monitor. Your responsibilities will include designing and performing experiments and providing input into strategic business decisions. Ability to set and meet goals and to work well in a team environment is essential. Accumetrics offers a competitive salary, generous equity participation, and exciting growth opportunities. Please send curriculum vitae to: **Accumetrics, Inc., 11175 Flintkote Avenue, San Diego, CA 92121.**

POSTDOCTORAL POSITION CORTICAL PHYSIOLOGY

Opportunity for independent research in a laboratory applying electrophysiological, functional imaging, and neuroanatomical techniques to study the organization, development, and plasticity of intrinsic synaptic circuits in the cerebral cortex. Experience in whole-cell or intracellular recording techniques is essential. Send application, including description of research accomplishments and interests, to: **Dr. Asaf Keller, Department of Anatomy, University of Maryland School of Medicine, 685 West Baltimore Street, Baltimore, MD 21201.** Email: akeller@umabnet.ab.umd.edu.

POSTDOCTORAL POSITIONS available immediately to study molecular mechanisms by which chemical carcinogens induce mutations. Evidence suggests that a single adduct may adopt multiple conformations in DNA, where each conformation may induce a different kind of mutation. This may explain how many potent carcinogens induce such a complex array of mutations. Molecular biological, genetic, and biochemical techniques are being used to investigate this hypothesis. Send curriculum vitae and reference letters to: **Edward L. Loecher, Biology Department, Boston University, 5 Cummington Street, Boston, MA 02215.**

POSITIONS OPEN

RESEARCH ECOLOGIST (GS 12-13) Salary Range \$43,658 to \$67,491

The Subsurface Protection and Remediation Division of the National Risk Management Research Laboratory, United States Environmental Protection Agency (USEPA) is looking for a **RESEARCH ECOLOGIST** to take a lead role in planning and implementing its recently expanded ecosystem research program. Research will be directed toward restoration and protection of the structure and function of watershed ecosystems. The successful candidate should have an interest in the principles and practices of ecosystem management, have an established record of research and publication, and be able to work as part of an interdisciplinary team including hydrologists, hydrogeologists, microbiologists, soil scientists, and engineers. The Subsurface Protection and Remediation Division of the National Risk Management Research Laboratory is a national research facility with a staff of about 150. *U.S. citizenship is a requirement for employment.* For further information and a copy of the official announcement and the necessary forms please contact: **The Federal Job Opportunities Bulletin Board (BBS), Telephone: 912-757-3100; the Career America Connection, Telephone: 912-757-3000; or the EPA Las Vegas Job Line, Telephone: 702-798-2418.** *The USEPA is an Equal Opportunity Employer and does not discriminate in hiring on the basis of sexual orientation.*

SOIL SCIENTIST (GS-470-11/12) USDA-ARS, U.S. Salinity Laboratory, Riverside, California is seeking a research scientist to conduct innovative basic and applied research on mechanisms, processes, and factors that influence the transport and fate of pesticides, soil fumigants, and other chemicals in irrigated agricultural soils. The incumbent will conceive, plan, design, and conduct experiments to provide information on the important mechanisms, processes, and factors affecting pesticide movement in irrigated systems. *Must be a U.S. citizen.* A Ph.D. is highly desirable. Knowledge of soil physics, hydrology, agricultural engineering, and chemistry relating to the movement of water, heat, and chemicals in irrigated systems. Salary is commensurate with experience (\$37,000 to \$44,000). For information and forms call: **Gladys Greer, Administrative Officer, Telephone 909-369-4813** no later than August 21, 1996. *USDA, ARS is an Equal Opportunity Employer; women and minorities are encouraged to apply.*

INDUSTRIAL RESEARCH SCIENTIST

ChemGen Corp. is seeking a highly motivated Ph.D. scientist to join a project team developing a fermentation process for the production of a pharmaceutical intermediate using an engineered *E. coli*. The work will involve gene cloning and expression, microbial genetics, enzymology, fermentation, and recovery process development. Strong experience in molecular biology is a requirement.

ChemGen is an 11-year-old, successful, employee-owned corporation with patented products sold internationally. We are dedicated to the application of biotechnology in fulfilling important agricultural and industrial needs. If you like challenging projects involving interdisciplinary goal-oriented research and development, investigate joining ChemGen. Please respond with your curriculum vitae and three personal references to: **ChemGen Corp., 211 Perry Parkway, Gaithersburg, MD 20877-2144.** *Equal Opportunity Employer.*

POSTDOCTORAL TRAINING CLINICAL CHEMISTRY

One position available on July 1, 1997 for basic scientist or physician interested in career as laboratory director in academic Laboratory Medicine. Our two-year program provides practical experience in clinical chemistry laboratories and extends relevant basic scientific knowledge. Write to: **Margaret A. Kenny, Ph.D., Co-Director, Chemistry Postdoctoral Program, Department of Laboratory Medicine Box 357110, University of Washington, Seattle, WA 98195-7110.** *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available for a Ph.D. or M.D. to study the pathogenesis of human and murine insulin-dependent diabetes and potential immunotherapeutics (see *Nature*, 366:69-72, 1993). Experience in cellular immunology preferred. Send curriculum vitae; reprints; and names, addresses, and telephone numbers of three references to: **Daniel L. Kaufman, Department of Molecular and Medical Pharmacology, University of California, Los Angeles, Los Angeles, CA 90095-1735.** *Affirmative Action/Equal Opportunity Employer.*

**UNITED STATES DEPARTMENT OF
AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
NATIONAL PROGRAM LEADER
(OILSEEDS AND PLANT BIOSCIENCE)**

The National Program Staff, Agricultural Research Service, USDA is seeking applicants for the position of National Program Leader (Oilseeds and Plant Bioscience), Plant Sciences Staff, at Beltsville, MD. The incumbent will provide national leadership and coordination of agricultural research programs relating to oilseed crops, new crops development, and plant bioscience; the latter includes fundamental molecular biological and molecular genetic approaches to agricultural problems. The appointment is a permanent full-time position and requires U.S. citizenship. Candidates must possess 1) a Bachelor's degree or higher (a Ph.D. is desirable) in plant physiology, plant pathology, genetics, or agronomy and 2) specialized experience directly related to the position. Candidates must have research experience with one or more of the major oilseed crops and knowledge of plant molecular biology or molecular genetics, as well as demonstrated ability to administratively lead and coordinate research programs. For specific qualifications see vacancy announcement. Salary commensurate with experience (\$62,473 to \$95,531). For information, contact **Dr. J. B. St. John, (301) 504-6252, fax: (301) 504-6191, or email: jsj@ars.usda.gov**. For an application package with complete qualification requirements and instructions, contact the **Human Resources Division, (301) 344-4638 or (301) 344-2288** and request vacancy announcement number ARS-H-6-021. Applications must be marked ARS-H-6-021-B606 and be postmarked by August 12, 1996.

**NATIONAL PROGRAM LEADER
(WEED SCIENCE)**

The National Program Staff, Agricultural Research Service, USDA is seeking applicants for the position of National Program Leader (Weed Science), Plant Sciences Staff, at Beltsville, MD. The incumbent will provide national leadership and coordination of agricultural research programs relating to weed science. The appointment is a permanent full-time position and requires U.S. citizenship. Candidates must possess 1) a Bachelor's degree or higher (a Ph.D. is desirable) in plant physiology, plant pathology, ecology, entomology, or agronomy and 2) specialized experience directly related to the position. Candidates must have research experience with integrated approaches to weed management and control, as well as demonstrated ability to administratively lead and coordinate research programs. For specific qualifications see vacancy announcement. Salary commensurate with experience (\$62,473 to \$95,531). For information, contact **Dr. J. B. St. John, (301) 504-6252, fax: (301) 504-6191, or email: jsj@ars.usda.gov**. For an application package with complete qualification requirements and instructions, contact the **Human Resources Division, (301) 344-4638 or (301) 344-2288** and request vacancy announcement number ARS-H-6-020. Applications must be marked ARS-H-6-021-B607 and be postmarked by August 12, 1996.

USDA/ARS is an Equal Opportunity Employer



Bristol-Myers Squibb Company

The Bristol-Myers Squibb Pharmaceutical Research Institute in Syracuse, New York has openings for two research scientists in the department of Analytical Research & Development.

Analytical Research & Development

Research Investigator/Sr. Research Investigator

This position is responsible for leading a group that implements, optimizes and validates immunologic and molecular techniques used to characterize natural and recombinant protein products. Requirements are a Ph.D. in Immunology or Cell and Molecular Biochemistry with 2-8 years proven experience in Immunology, Molecular Biology and Bioanalytical Techniques (e.g., hybridoma technology, antibody production, immunoassay technology including ELISA, epitope mapping, BIAcore, cell transfections, reporter cell lines, etc.). Experience in instrument automation is desired. **Job #SY-950033.**

Associate Research Scientist/Research Investigator

Responsibilities include the design, optimization, validation of cellular assays (i.e., mammalian cell-based proliferation, cytotoxicity assays, etc.), immunoassays and molecular biology based assays used to characterize natural and recombinant protein products. The successful candidate will have an M.S. degree with 7+ years experience or a Ph.D. degree with 3+ years experience in Immunology, Cell Biology, Biochemistry, or Molecular Biology. Must have proven experience in cell biology, immunology, molecular biology and bioanalytical techniques (e.g., mammalian cell-based bioassays, cell transfections, reporter cell lines, etc.). Experience with instrument computer interfacing is a plus. **Job #SY-96045.**

Bristol-Myers Squibb offers an excellent salary, comprehensive benefits and a working environment conducive to professional growth. For confidential consideration, forward your resume with Job # and salary requirements to: **Manager, Human Resources, Bristol-Myers Squibb Company, P.O. Box 4755, Syracuse, NY 13221-4755.** Equal Opportunity Employer, M/F/D/V.



Dedicated to Science. Focused on Discovery.

Parke-Davis Research Division and University of Michigan have initiated a joint postdoc training program. Our team members are encouraged to pursue discovery together—and explore all the possibilities of scientific problem solving.

PHARMACOLOGY/NEUROSCIENCE POSTDOC POSITION

The candidate will study the biochemical regulation of nitric oxide synthase by pharmacological agents to include protein chemistry/enzymology, cell biology and whole animal pharmacology. Applicants should possess a recent Ph.D., M.D. or equivalent and strong experience in protein biochemistry and/or cell biology with some molecular biological expertise. **JOB CODE CJM-PN**



BIOLOGICAL CHEMISTRY POSTDOC POSITION

The selected candidate will study aspects of G protein coupled signaling. The candidate should have up to 2 years of post doctoral training and must have experience in molecular biology and some aspects of protein biochemistry, protein purification and cell culture. **JOB CODE CJM-BC**

PHARMACOLOGY/MOLECULAR BIOLOGY POSTDOC POSITION

The chosen candidate will study the regulation of voltage sensitive sodium channels by beta subunits. The candidate will be responsible for studying the biosynthesis, processing and assembly of sodium channel components using molecular biological and biochemical approaches. Applicants should be recent M.D. or Ph.D. graduates in biochemistry, molecular biology, neuroscience or pharmacology with a working knowledge of molecular biological techniques. Experience in pharmacology or protein chemistry is desirable. Overall ability, enthusiasm and motivation are critical. **JOB CODE CJM-PMB**

Members of our world-class pharmaceutical team enjoy world-class salaries, benefits and career growth potential. Candidates should send, fax or e-mail a cover letter, curriculum vitae and a list of three references indicating the proper job code to: **Parke-Davis Pharmaceutical Research, Human Resources Department, 2800 Plymouth Road, Ann Arbor, MI 48105. Fax: (313) 996-7617. E-mail: resume@aa.wl.com.**



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Equal opportunity in action. Smoke-free work environment

POSITIONS OPEN

POSTDOCTORAL POSITION Molecular Biology of Membrane Proteins

POSTDOCTORAL POSITION(S) are available to develop and apply modern techniques of molecular biology and protein chemistry to study structural aspects (topology, folding, organization of ligand binding domains) and dynamics of cation-transporting P-type ATPases. Strong background in molecular biology and/or protein chemistry required. Send curriculum vitae and names of three references to:

Professor Jack H. Kaplan, Ph.D., F.R.S.
Department of Biochemistry and
Molecular Biology, L224
Oregon Health Sciences University
3181 S.W. Sam Jackson Park Road
Portland, OR 97201-3098

EUKARYOTIC TRANSCRIPTION MECHANISMS

TWO POSTDOCTORAL slots immediately available to study initiation/regulation of rRNA and 5S RNA transcription (*Cell*, 47:445, 1986; *Cell*, 50:693, 1987; *Mol. Cell. Biol.*, 14:597, 1994; *Mol. Cell. Biol.*, 15:4956 and 3327, 1995). Recent Ph.D.s experienced in molecular gene cloning/gene analysis/mutagenesis, and/or protein structural analysis are sought. Competitive salary and benefits; at foot of the Rocky Mountains. Send résumé and have three letters of recommendation sent by September 1, 1996 to: Marvin Paule, Biochemistry and Molecular Biology, Colorado State University, Fort Collins, CO 80523-1870. *Equal Opportunity/Affirmative Action Employer*. Office 21 Spruce Hall.

POSTDOCTORAL FELLOWSHIP

Position available to study the mechanism of gene regulation by transcription factors belonging to the steroid-thyroid receptor superfamily. A strong background in molecular and cellular biology and familiarity with recombinant plasmid construction, gene transfection, DNA-protein interaction assays, and protein expression and purification are required. Send curriculum vitae and names and addresses of three references to: Dr. Milan Bagchi, The Population Council, Center for Biomedical Research, Box 273, 1230 York Avenue, New York, NY 10021. *An Equal Opportunity/Affirmative Action Employer. Minorities/Females.*

POSTDOCTORAL/RESEARCH ASSOCIATE POSITION

Immunology/Virology/Multiple Sclerosis FELLOW-SHIP: The MS Center at The New York Hospital-Cornell University Medical College is seeking qualified scientists to conduct basic research in multiple sclerosis. Potential for junior faculty position and lab directorship. Accepting applicants with Ph.D. and/or M.D. degree and strong training in cellular and molecular biology, with interests in neuroscience, immunology, or virology. Contact: Brian R. Apatoff, M.D., Ph.D., Department of Neurology and Neuroscience. Telephone: 212-746-4504; FAX: 212-746-8082; Email: brapatof@mail.med.cornell.edu. *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS MAMMALIAN FERTILIZATION

Mount Sinai School of Medicine
Department of Cell Biology and Anatomy

Applications are requested for POSTDOCTORAL FELLOW positions from applicants with experience in molecular biology and transgenic mouse research to investigate aspects of species-specific fertilization in mammals. Please send your curriculum vitae and the names of three references to: Dr. Paul M. Wassarman, Department of Cell Biology and Anatomy, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574. *Equal Opportunity Employer.*

POSTDOCTORAL POSITION—Position available to study the regulation and effects of glutathione nitrosation in airway epithelial cells. Experience with cell culture, biochemical assays, and molecular methods required; interest in physiologic techniques, including ion channel studies and smooth muscle bioassays, ideal. Send curriculum vitae, a brief letter stating career goals, and addresses for three letters of reference to: Benjamin Gaston, M.D., University of Virginia Health Sciences Center, MR-4/Room 2032, Charlottesville, VA 22908. *The University of Virginia is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL. *In vitro* protein evolution. Ph.D. in biochemistry or molecular biology and experience with molecular evolution, protein characterization methods. Send résumé and names of three references to: Prof. F. H. Arnold, Division of Chemistry and Chemical Engineering 210-41, California Institute of Technology, Pasadena, CA 91125. *Caltech is an Equal Opportunity/Affirmative Action Employer.*

A POSTDOCTORAL POSITION is available immediately in the Division of Clinical Pharmacology and Toxicology, Research Institute, The Hospital for Sick Children, Toronto, for a project funded by the National Cancer Institute of Canada to study molecular and cellular mechanisms of chemical carcinogenesis. Extensive research experience in molecular biology and transgenic/knockout mice is essential; a background in enzymology, protein biochemistry, cell biology, and/or drug metabolism is also desirable. Send curriculum vitae and three references by mail, or preferably by FAX or Email, to: Dr. Denis Grant, Division of Clinical Pharmacology and Toxicology, Research Institute, The Hospital for Sick Children, 555 University Avenue, Toronto, Ontario M5G 1X8 Canada. FAX: 416-813-7562; Email: grant@sickkids.on.ca. *In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada.*

POSTDOCTORAL FELLOW

A position is available for research on membrane mechanisms underlying sensory transduction in olfactory receptor neurons, with collaborative studies on the molecular biology of G-protein coupled olfactory receptors and cyclic nucleotide gated channels. Candidates should have a strong background in patch recording and/or Ca imaging techniques. Send curriculum vitae and names of three references to: Dr. Gordon M. Shepherd, Section of Neurobiology, Yale Medical School, 333 Cedar Street, New Haven, CT 06510. Email: gordon_shepherd@qm.med.yale.edu. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available immediately to investigate the function of the *His-1* gene and its role in oncogenesis (*Mol. Cell Biol.*, 14:1743, 1994). Candidates must hold a Ph.D. degree with laboratory experience in molecular biology. Background in promoter analysis and gene regulation preferred.

Send curriculum vitae with the names of three references to: Dr. David S. Askew, Department of Pathology and Laboratory Medicine, University of Cincinnati, P.O. Box 670529, Cincinnati, OH 45267-0529.

POSTDOCTORAL POSITION available in neurodegeneration and neuroprotection research. The successful candidate will join a laboratory investigating cellular/molecular mechanisms underlying neurodegeneration and neuroprotection in Parkinson's disease models, apoptosis of dopamine neurons, and regulation of neurotransmitter transporters in health and disease. Candidates need a Ph.D. degree in one of the biological sciences, experience in molecular biology, and fluency in the English language. Submit curriculum vitae, statement of research interests, and names of references to: Jay S. Schneider, Ph.D., Department of Neurobiology and Anatomy, Allegheny University of Health Sciences, M.S. 408, Broad and Vine Streets, Philadelphia, PA 19102. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available to join an ongoing NIH-funded project investigating the role of the homeodomain transcription factors *MSX1* and *MSX2* in mammalian craniofacial development using tissue/organ culture and transgenic mouse models. Training in developmental biology, including *in situ* hybridization, is preferred. Send cover letter, curriculum vitae, and three reference letters directly to: Gregg L. Semenza, M.D., Ph.D., Center for Medical Genetics, CMSC-1004, Johns Hopkins University School of Medicine, 600 North Wolfe Street, Baltimore, MD 21287-3914. FAX: 410-955-0484.

MOLECULAR BIOLOGY

POSTDOCTORAL RESEARCH ASSOCIATE to join a group studying RNA-protein interactions that control translation and mRNA localization, gene targeting of isozymes, and the use of structure-based drug design to develop novel contraceptives. Send curriculum vitae and names of two references to: Norman B. Hecht, Biology Department, Tufts University, Medford, MA 02155.

POSITIONS OPEN

SCHIZOPHRENIA/HUMAN BRAIN PROJECT

POSTDOCTORAL POSITION available immediately to work on the neuropathology of schizophrenia in an ongoing program. Two or more years of experience in neuroanatomy and/or molecular biology preferred. Suitable for a candidate with interests in morphometry/data basing. M.D. or Ph.D.

Send curriculum vitae and three references to:

Dr. Edward G. Jones
Department of Anatomy and Neurobiology
College of Medicine
University of California, Irvine
132 Irvine Hall
Irvine, CA 92697-1280

VISION RESEARCH POSTDOCTORAL POSITION

Applications are invited for a POSTDOCTORAL POSITION to study motion and colour perception and/or perceptual aspects related to oculomotor function in humans. The position is for one year, with possible renewal for a second year. Please forward a cover letter indicating research interests along with a curriculum vitae and names/telephone numbers of two referees to: Dr. Avi Chaudhuri, Department of Psychology, McGill University, 1205 Dr. Penfield Avenue, Montreal, Quebec H3A 1B1 Canada. Email: avi@hebb.psych.mcgill.ca; <http://www.psych.mcgill.ca/labs/chaudhuri/homepage.clab.html>.

POSTDOCTORAL FELLOW

Study signal transduction in gap junctional communication regulated cell proliferation. Molecular biologist experienced in cloning, differential display, 2D-PAGE and receptor biology. Send/fax résumé with names and telephone numbers of three references to: Shu-Chih Chen, Ph.D., Molecular Medicine, Northwest Hospital, 120 Northgate Plaza, Suite 230, Seattle, WA 98125. FAX: 206-368-3009; Email: schen@fred.fhcc.org.

ANTICIPATED POSTDOCTORAL RESEARCHER

A position is available to conduct research on proteins involved in DNA repair (*EMBO J.*, 15:2306, 1996). Candidates should have experience in molecular biology and nucleic acid biochemistry. Qualified applicants should forward curriculum vitae and the names and telephone numbers of three references to: Evelyn Bennett, Assistant Director, HRM, Reference: Deutsch, Pennington Biomedical Research Center, 6400 Perkins Road, Baton Rouge, LA 70808. *LSU/Pennington Biomedical Research Center is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION is available to study cellular regulation of autoimmune diabetes in murine models of IDDM. Ph.D. or M.D. degree required with background in cellular immunology including flow cytometry, cytokine assays, cell culture, and handling of animals. Molecular techniques desirable. Send curriculum vitae to: Kevan C. Herold, M.D., The University of Illinois at Chicago, 1819 West Polk Street, M/D 640, Chicago, IL 60612. Email: kherold@uic.edu.

POSTDOCTORAL POSITION University of California San Francisco

A POSTDOCTORAL POSITION is available to study the high resolution three dimensional structure of meiotic and mitotic chromosomes and other cellular components using IVEM tomography. Our goal is to combine structural data with biochemical and genetic information to develop a better understanding of the molecular basis for function. Requirements include an interest in cell biology as well as electron microscopy and/or image processing.

We offer a competitive salary and excellent benefits package. Please send your résumé and three references to: Dr. David Agard, University of California San Francisco, 513 Parnassus Avenue, San Francisco, CA 94143-0448. *Equal Opportunity Employer.*

POSTDOCTORAL POSITION in molecular parasitology available to study mitochondrial DNA replication proteins in trypanosomes. Ph.D. in biochemistry or molecular biology, experience in protein purification, and excellent English language skills required. Send curriculum vitae and names of three references to: Dr. Dan S. Ray, Molecular Biology Institute, UCLA, Los Angeles, CA 90095-1570. Email: danray@mbi.ucla.edu.

**NATIONAL CANCER INSTITUTE
DIVISION OF BASIC SCIENCES
BETHESDA, MARYLAND**

Opening Date: June 17, 1996

Closing Date: August 5, 1996

Announcement Number: CA-96-00094

**SENIOR SCIENTIST
LABORATORY OF CELLULAR AND
MOLECULAR BIOLOGY**

The Division of Basic Science (DBS), National Cancer Institute (NCI), National Institutes of Health (NIH), is seeking an outstanding individual to fill a Senior Scientist position in the Laboratory of Cellular and Molecular Biology; Chief, Jacalyn H. Pierce, Ph.D. Candidates should be internationally recognized for their expertise, leadership, and collaborative capabilities in the area of signal transduction.

The goal of his/her research program will be to investigate topics involving growth factor and cytokine receptor structure/function, tyrosine and serine/threonine kinases and phosphatases, identification and analysis of downstream effector molecules such as those in the JAK/STAT and Ras/MAP kinase pathways, and nuclear events that occur as the result of activation of different signaling cascades. Emphasis will be placed on the role of signal transduction pathways in the development of cancer.

The selected scientist will be responsible for ensuring the effective functioning of his/her program by creating and maintaining an interactive scientific environment that supports and enhances the research projects of the investigators within the program. The selected scientist is someone who possesses excellent scientific judgment, is able to recruit and mentor the best scientists, and possesses strong managerial skills.

Candidates must possess a medical and/or other doctoral-level degree in a biomedical or related field. In addition, candidates must be either U.S. citizens, citizens of treaty allied countries, or nonresident aliens with valid work visas. Total annual compensation will be commensurate with education and experience and ranges from \$52,867 to \$148,400.

Applicants should send a cover letter of interest in the position, a statement of research interests, curriculum vitae, bibliography, and the names and addresses of five individuals who can be contacted as references. Letters of reference should not be submitted by the applicant. This material should be sent to:

**Ms. Toni McKeown
National Cancer Institute
Human Resources Management Branch
6120 Executive Boulevard
Room 537, EPS
Rockville, MD 20852**

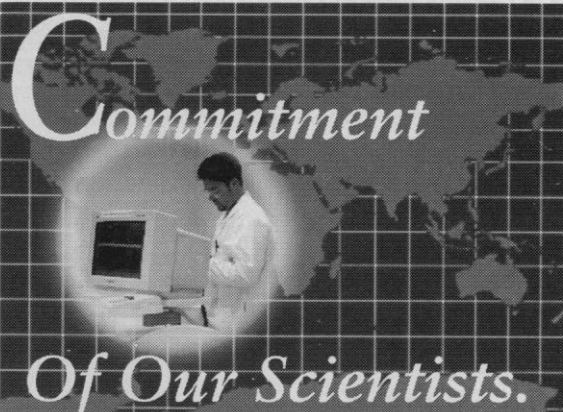
Applications may also be faxed to (301) 402-9333.

If you need additional information, please call Ms. Toni McKeown, NCI Human Resources Management Consulting Branch, on (301) 402-2812.

Selection for this position will be based solely on merit, with no discrimination for non-merit reasons such as race, color, gender, national origin, age, religion, sexual orientation, or physical or mental disability.

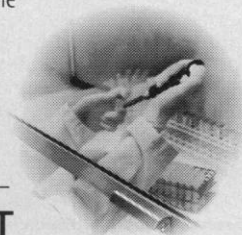
NIH is an Equal Opportunity Employer

THE WORLD DEPENDS ON THE



It takes world-class employees to make a world-class company.

At Abbott Laboratories, our professionals are researching, developing and marketing the health care products that will make a significant impact on generations to come. The Immunoscience Research Area is expanding its efforts to develop novel therapeutics for inflammatory and autoimmune diseases. Research positions are available at the Senior Scientist and Associate Scientist level for individuals who are highly interested in drug discovery and who are able to work well within a group toward common goals.



SENIOR SCIENTIST In Vivo

An in vivo research position is available for a Senior Research Scientist who will establish and direct a research program to characterize the in vivo anti-inflammatory potential of novel small molecules. Applicants should possess a PhD in the biological sciences with 3-5 years of postdoctoral research training involving animal models of inflammation and/or autoimmunity. (Job #96-JLW-1356)

ASSOCIATE SCIENTIST In Vivo

A research background in models of inflammation and/or autoimmune disease is desired. Individuals with animal research experience, including surgical manipulations, injection and sampling techniques, HPLC analysis of drug blood levels, immunoassay methods, or development of disease models will be considered. Successful candidates should possess a MS or BS with 2+ years of research experience in immunology or a related field. (Job #96-JLW-1358)

With 50,000 employees worldwide, and more than \$10 billion in annual sales, we've established ourselves as a respected global business and innovative leader in the changing health care industry. For consideration, please send your resume with salary history to: Abbott Laboratories, Job # _____, D583, AP6B, 100 Abbott Park Rd., Abbott Park, IL 60064. Abbott is an Affirmative Action Employer/Smoke-Free Environment.

**ABBOTT
LABORATORIES**
Quality Health Care Worldwide



ACADEMIC AFFAIRS

The California State University, Office of the Chancellor, invites nominations and applications for the position of ACADEMIC PLANNER/MATHEMATICS & SCIENCE. The California State University is the largest system of senior education in the country, its 22 campuses and seven off-campus centers extend from Northern to Southern California. Since 1961, the CSU has awarded more than 1.32 million Bachelor's degrees, 270,000 Master's degrees and 290 joint Doctorates. The CSU prepares two-thirds of the public school teachers educated in California, and about 10 percent of the nation's K-12 instructors. In addition, the system produces 50 percent more business graduates and more computer scientists and engineers than all other California universities and colleges combined. Currently, more than 325,000 students are enrolled in the CSU's undergraduate and graduate degree programs.

Academic Planner/Mathematics and Science

The selected individual will address issues involving policy analysis, student and societal education needs, teaching and learning strategies, assessment and accountability, enrollment management, finance, technology and academic program development. The candidate must possess a Doctorate in a science or mathematics-related discipline and significant experience in academic planning, strategic planning and/or policy analysis. You must have superior communication skills as well as facility in promoting teamwork interpersonal relations. Candidates must possess an understanding of public policy and academic program issues, a talent for achieving consensus, statistical analysis capabilities, computer modeling, forecasting, simulation and the use of the Internet and WWW.

An attractive management compensation package is offered along with a salary commensurate with qualifications and experience. Resume reviews will continue until the position is filled. Please submit a letter of application addressing the desired qualifications, curriculum vitae, and the names and telephone numbers of three references to: Personnel Services, Ref: AA/APA-2SR, The California State University, Office of the Chancellor, 400 Golden Shore, Suite 228, Long Beach, CA 90802-4275. The Office of the Chancellor is an Equal Employment Opportunity/Affirmative Action Employer.

THE OFFICE

OF THE

CHANCELLOR

REGIONAL TOXICOLOGIST

The U.S. Environmental Protection Agency-Region 8 in Denver, CO supports the use of sound science in regulatory decision-making. We are presently looking for a highly qualified toxicologist with specific training in the areas of terrestrial, avian, and/or riparian ecology to serve as a scientific advisor, study coordinator, and technical group organizer within the Ecosystems Protection Program. A second position is available within our hazardous waste program for a toxicologist with a broad background in pharmacology, biochemistry, and/or physiology. An advanced degree (Ph.D. or D.V.M.), advanced training in toxicology, board certification in toxicology, a working knowledge of EPA risk assessment guidance and/or considerable experience related to ecotoxicology and/or human toxicology are desirable. These positions will be filled at the GS 12/13 level; salary range \$44,584 to \$68,923 per annum, depending on qualifications. Candidates must be U.S. citizens. An Equal Opportunity Employer. Inquiries and requests for the position description or government applications should be directed to Deb Slavinski, (303) 312-6114 or Valerie Taylor, (303) 312-6200; 999 18th St., Ste. 500, Denver, CO 80202. Correctly completed applications will be accepted if postmarked on or prior to August 16, 1996.



Region VIII

GENOME SEQUENCING RESEARCH at Cold Spring Harbor Laboratory

Postdoctoral/visiting scientist/research associate position available to work on genome sequence analysis of *Arabidopsis thaliana*. Additional positions may be available for human genome sequencing. Genome or automated sequencing related experience or *Arabidopsis* molecular biology experience desired but not essential. Motivated candidates with a strong background in microbiology, molecular biology, genetics or biochemistry will be considered. Start date is negotiable.

Cold Spring Harbor offers an outstanding combination of intellectual environment, physical setting and state-of-the-art lab facilities. The work will be carried out in the McClintock Building and the newly remodeled (7/96) Hershey Building. To learn more about this position please send curriculum vitae and 3 letters of reference to: Dr. W. Richard McCombie, Cold Spring Harbor Lab, P. O. Box 100, Cold Spring Harbor, New York 11724.

Equal Opportunity Employer M/F



ENDOWED CHAIR IN DESERT AGRICULTURE

UNIVERSITY OF CALIFORNIA, RIVERSIDE

Applications are invited for a distinguished senior faculty position in the College of Natural and Agricultural Sciences, University of California, Riverside. The Mouradick Chair for Desert Agriculture is to be filled at the Associate or Full Professor level with departmental affiliation linked to the appointee's area of expertise. The position is available July 1, 1997 and carries a 25% teaching and 75% research appointment, with research support from the endowment. The College of Natural and Agricultural Sciences, with its relationship to the Agricultural Experiment Station, has made arid-zone irrigated agriculture a primary research focus. Supporting this research area and the Mouradick Chair is the Institute for Desert Agriculture, a unique partnership between the desert agricultural community and the University of California; a newly formed Center for Exotic Pest Research; an active Plant Stress Group; and a proposed Biotechnology Research Center. In addition, the close proximity of UC Riverside to large arid agricultural regions and supporting research stations in the Coachella, Imperial, Palo Verde, and Central valleys emphasizes the importance of desert agriculture to the UCR mission. We seek an internationally recognized scholar to develop a distinguished research and teaching program in support of desert agriculture. Areas of research emphasis may include, but are not limited to: environmental sciences, irrigation science, plant sciences, pest and disease sciences, and soil science. Curriculum vitae; a list of references, and a summary of research and teaching interests should be sent to: Search Committee, Mouradick Chair for Desert Agriculture, College of Natural and Agricultural Sciences, University of California, Riverside, CA 92521. Review of applications will begin September 1, 1996 and will continue until the position is filled.



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

RESEARCH ASSISTANT/ASSOCIATE IMMUNOHISTOCHEMISTRY



Genentech is a pace-setting biotechnology company that discovers, manufactures and markets human pharmaceuticals for significant unmet medical needs. Our product pipeline is the richest in the industry and we are the only biotech company with five marketed products. To continue our record of success, we are seeking a Research Assistant/Associate to provide technical support and expertise in a new immunohistochemistry laboratory.

You will work as part of a team focused on the development and optimization of immunohistochemical methods for evaluating animal tissues and cell lines to support specific research projects using both commercially available and Genentech generated antibodies. The lab's mission is to also expand the use of image analysis to quantify and evaluate immunohistochemistry. You will utilize your thorough knowledge of physiology and tissue sectioning, basic histology, immunohistochemistry and lab management skills on a daily basis.

This opportunity requires a BS/BA in the life sciences and advanced research training with an MS or an equivalent combination of education and experience. We seek a team player who is also capable of working independently and who has the ability to effectively manage multiple projects. Expertise in microscopy, tissue sectioning (particularly cryotomy), basic histology and a thorough working knowledge of immunohistochemistry including problem solving is highly desirable. Experience with lab animal procedures, basic molecular biology techniques, image analysis and confocal microscopy would be a plus.

Join us and enjoy our exciting success and progressive benefit package that includes free health club membership, 3 weeks paid vacation, 6 weeks sabbatical after 6 years, fully paid medical/dental/vision coverage, and Company stock purchase opportunities for full time employees. For consideration, send your resume indicating appropriate Job code to Genentech, Inc., Human Resources Dept., MCBC, 460 Pt. San Bruno Blvd., South San Francisco, CA 94080. We value creativity at Genentech, but our scanning equipment does not. Please avoid bold, underline or italic type faces. You may also e-mail your resume indicating Dept. code to jobs@gene.com (ASCII files only with a maximum line width of 76 characters). Find out more about Genentech at <http://www.gene.com/>. Genentech is an Equal Opportunity Employer. We value the contributions of our diverse workforce.

Genentech, Inc.

VIROLOGIST

Senior Scientist/Investigator

SmithKline Beecham Pharmaceuticals, a worldwide leader in pharmaceutical research, has an opportunity for a Scientist to join the Department of Molecular Virology and Host Defense.

In conjunction with other scientists, the selected candidate will plan and conduct studies of antiviral resistance to include: analysis of clinical herpes virus isolates, molecular analysis of viral genes and research to define molecular mechanisms of resistance. The candidate will also participate in discovery efforts for new antivirals for herpes viruses, and bioinformatic analysis of viral gene sequences to define new drug targets.

Qualified candidates will have Ph.D. (exceptional candidates with an M.S. will be considered) in virology, microbiology or related field, with relevant post-graduate/doctoral experience in herpes virology, and excellent communication skills. Collaborative or clinical experience, and supervisory experience are desirable. Demonstrated skills in viral genetics, DNA replication and bioinformatics are particularly relevant.

Located in our state-of-the-art research facility in suburban Philadelphia, SmithKline Beecham offers an excellent compensation/benefits/relocation package. Qualified candidates should forward a resume and salary requirements to: SmithKline Beecham Pharmaceuticals, Job Code H6-0539A, P.O. Box 2646, Bala Cynwyd, PA 19004. We are an Equal Opportunity Employer, M/F/D/V.



SmithKline Beecham
Pharmaceuticals

Challenging the natural limits.

GLOBAL CAREER OPPORTUNITIES



Anti-Cancer Council
of Victoria

VICTORIAN BREAST CANCER RESEARCH INITIATIVE

The Victorian Government has established a Consortium of Victorian medical research institutes to work together in a cooperative research programme aimed at developing novel strategies for the prevention, diagnosis and care of breast cancer. To this end, \$3M per annum has been committed for ten years for basic research on normal and neoplastic breast development.

Group Leaders are sought for 3-5 major new programmes within participating institutes. Appointments will be for 5 years in the first instance, with review after 3 years and an expectation of an additional 5-year term. Strong collaboration between these groups and with clinicians treating breast cancer will be encouraged and facilitated.

Research areas envisaged include:

- Developmental Biology** – stem cells, cell migration, growth factors, organogenesis, homeostasis
- Molecular and Cell Biology** – hormones, cytokines, signalling, differentiation, apoptosis, metastasis
- Molecular Genetics** – susceptibility genes, oncogenes, tumour suppressor genes
- Biologic Therapies** – gene therapy, immunotherapy, rational drug design
- Molecular Pathology** – DCIS, metastasis

Interested scientists should contact one of the Directors listed below by 19th August, 1996, providing their curriculum vitae, a short (2-page) vision statement and the names, addresses and fax numbers of three referees familiar with their recent scientific achievements, potential for leadership and ability to collaborate.

Professor Henry Burger, Prince Henry's Institute of Medical Research, Fax: +61 3 9550 6125

Professor Suzanne Cory, The Walter and Eliza Hall Institute, Fax: +61 3 9345 2508

Professor John Funder, Baker Medical Research Institute, Fax: +61 3 9510 4368

Professor Jack Martin, St Vincent's Institute of Medical Research, Fax: +61 3 9416 2676

Professor Ian McKenzie, Austin Research Institute, Fax: +61 3 9287 0601

Professor Joe Sambrook, Peter MacCallum Cancer Institute, Fax: +61 3 9656 1414

Applicants selected for further consideration will be invited to submit a full research proposal to the full Selection Committee, which will include national and international experts.

Further information about the Consortium is also available from Tony Burgess (Fax +61 3 9347 1938, E-mail vbcri@licre.ludwig.edu.au) or Professor Robert Burton, Anti-Cancer Council of Victoria, 1 Rathdowne Street, Carlton South 3053 (Fax: +61 3 9279 1250), or Web Page: <http://www.ludwig.edu.au/~vbcri/>

This opportunity has been made possible by a long-term initiative of the Victorian Government and the Anti-Cancer Council of Victoria.

POSITIONS OPEN

STAFF ASSOCIATE

The Division of Pediatric Neurology at Columbia University is recruiting a **STAFF ASSOCIATE** to coordinate a multi-institutional grant investigating the incidence of carnitine deficiency in newborns. The coordinator should have a bachelor's or higher degree and at least four years of experience in multi-institutional research design, data management, epidemiological principles, and biostatistics. Preference will be given to applicants with postgraduate training in public health or experience in environmental health. The Staff Associate will be responsible for grant preparation, literature review, data entry and analysis, and other activities essential to the conduct of the research project. Direct inquiries to: **Darryl C. De Vivo, M.D., Neurological Institute, 710 West 168th Street, New York, NY 10032.**

Columbia University is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION Center for Surgical Research

POSTDOCTORAL POSITION available immediately to study the role of apoptosis in the induction of immune dysfunction associated with sepsis. A Ph.D. or equivalent degree in cell biology/immunology/microbiology is required. Emphasis on cellular immunology and molecular biology is desired. Previous experience with general molecular biological techniques (RNA/DNA, RT-PCR, *in situ* hybridization), cellular immunological assays (bioassays, ELISA, ELISpot, etc.), and signal transduction biological techniques essential. Starting salary is \$25,000 to \$28,000 with benefits dependent on qualifications. Send/FAX curriculum vitae, brief summary of salient research experience, and names and addresses of three references to: **Alfred Ayala, Ph.D., Center for Surgical Research, Middle House 211, Rhode Island Hospital, 593 Eddy Street, Providence, RI 02903. FAX: 401-444-3278.**

POSTDOCTORAL RESEARCH ASSOCIATE

Position available immediately for NIH-funded research to study the potential role of immune cells and cytokines in the skin in initiating a protective immune response against *Schistosoma mansoni*. The research project also involves cloning and characterization of a parasite-derived immunomodulatory factor. A Ph.D. in immunology/microbiology with experience in molecular biology and cellular immunology is preferred.

Please send curriculum vitae, summary of research experience, and three references to: **K. Ramaswamy or B. Salafsky, Department of Biomedical Sciences, University of Illinois College of Medicine, 1601 Parkview Avenue, Rockford, IL 61107. Telephone: 815-395-5696; FAX: 815-395-5666; Email: Ramswamy@uic.edu** for more information. The position will remain open until filled.

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

An opening is available for a three-year **POSTDOCTORAL FELLOWSHIP** beginning August 1, 1996. The project involves research on the interaction between ethanol and NNK administration in pregnant hamsters. The fellow will use molecular and biochemical assays to determine the effects of ethanol on the levels of CYP2E and will screen tumors for mutations in oncogenes and tumor suppressor genes. The fellow must have a strong background in CYP biochemistry and molecular biology. Starting salary is expected to be around \$25,000 including medical benefits. Please send curriculum vitae to: **Dr. Mark S. Miller, Department of Cancer Biology, Bowman Gray School of Medicine, Winston-Salem, NC 27157. Telephone: 910-716-0795; FAX: 910-716-0255; Email: msmiller@bgsbm.edu.**

POSTDOCTORAL POSITION available in allergy and inflammation research laboratory to study cellular and molecular aspects of the regulation of mast cell activation. Candidates should have a strong background in molecular biology, preferably including experience with mammalian cell transfection and transgenic technologies. Send curriculum vitae and three references to: **Howard R. Katz, Ph.D., Harvard Medical School/Brigham and Women's Hospital, 250 Longwood Avenue, Room 607, Boston, MA 02115. Email: hkatz@warren.med.harvard.edu. An Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIP'S MOLECULAR CANCER BIOLOGY

POSTDOCTORAL POSITIONS open September 1, 1996 with a newly established research group at the M.D. Anderson Cancer Center for talented Ph.D. and/or M.D. scientists in the following disciplines:

Apoptosis—Current studies include: 1) mechanisms by which apoptotic responses to chemotherapy are modulated by growth factor-mediated signal transduction pathways and by regulators of cell cycle traversal; 2) mechanisms of apoptosis induced by therapeutic agents including the role(s) of anti- and pro-apoptotic gene products.

Growth Factors—Ongoing investigations include: 1) novel mechanisms of action of anti-DGF receptor monoclonal antibodies; 2) mechanisms of heregulin/NDF action; 3) regulatory interactions between receptor tyrosine kinases and estrogen receptors in breast carcinoma cells.

Cell Cycle—Research focuses on: 1) regulation of cyclin dependent kinase inhibitors; 2) regulation of nuclear matrix proteins.

Experience in molecular biology, biochemistry, and signal transduction is desirable. For immediate consideration, please send curriculum vitae and names of three references to one of the three Principal Investigators in the group: **Drs. John Mendelsohn, Rakesh Kumar, Zhen Fan, Laboratory of Cell Growth Regulation, University of Texas M.D. Anderson Cancer Center, 1515 Holcombe Boulevard, Box 91, Houston, TX 77030. An Equal Opportunity Employer.**

UroCor, Inc., Molecular Biology: Seeking Postdoctoral and Research Assistant. UroCor discovers, acquires, and develops technology for urology disease management.

Position 1: POSTDOCTORAL—Ph.D. in molecular biology or related field; significant experience in PCR is strongly desired. Projects to develop quantitative RT-PCR, other molecular diagnostic products.

Position 2: RESEARCH ASSISTANT—M.S./B.S. in biological sciences with experience in cloning, DNA/RNA manipulations, PCR, library screening/sequencing. Characterize novel prostate disease genes for diagnostics/therapeutics. Direct résumés to: **UroSciences, Job Search, UroCor, Inc., R&D, 800 Research Parkway, Oklahoma City, OK 73104. Designate position 1 or position 2.**

POSTDOCTORAL GI

Are you a Ph.D. interested in investigating the pathogenesis of inflammatory bowel disease? You will establish research protocols and write grant proposals; supervise GI residents and research technicians; develop new methodologies and solve GI lab technical problems. You must have a Ph.D. in biomedical science, be a leader, and be familiar with biochemical and molecular biology techniques. Position is guaranteed for two years; faculty opportunity after one year.

Send curriculum vitae to: **Ali Keshavarzian, M.D., Division of Gastroenterology, Loyola University Medical Center, 2160 South First Avenue, Maywood, IL 60153. FAX: 708-216-4113. Equal Opportunity Employer.**

POSTDOCTORAL POSITION

Position available studying interneuron electrophysiology and synaptic plasticity in dentate gyrus of hippocampal slice employing infrared video microscopy, whole cell voltage clamp, and immunohistochemistry. Experience in cellular electrophysiology desired. Send curriculum vitae to: **Dr. Darrell Lewis, Box 3430, Duke University Medical Center, Durham, NC 27710. Email: lewis013@mc.duke.edu. Duke University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOW—Molecular Immunology: A position is immediately available to study MHC class II antigen presentation, B cell activation, and peptide/MHC stimulation of T cells clonally expanded in rheumatoid synovium. Requires Ph.D. and experience in cellular immunology and molecular biology. Prior work with antigenic peptides or signal transduction is desirable. Send curriculum vitae and a list of references to: **Dr. Daniel W. Carr, Veterans Affairs Medical Center, Mail Stop 151F, Portland, OR 97201. FAX: 503-721-1082; Email: carr.daniel_w@portland.va.gov.**

POSITIONS OPEN

POSTDOCTORAL POSITION

The Division of Urology at the University of Pennsylvania School of Medicine invites applications for **POSTDOCTORAL POSITIONS** funded by NIH Training Grant. Research areas available for multidisciplinary training include 1) mechanisms for smooth muscle contraction, 2) contractile dysfunction in smooth muscles in the urinary bladder wall and erectile tissue in the corpus cavernosum penis, 3) smooth muscle differentiation, 4) molecular electrophysiology, and 5) smooth muscle matrixes. Applicants must have a Ph.D. degree in cell biology, molecular biology, biochemistry, physiology, or pharmacology. Candidates with two to three years of previous postdoctoral training are also encouraged to apply. *U.S. citizenship or immigrant visa status is mandatory.* A letter, curriculum vitae, and a statement of research interests should be addressed to: **Dr. Samuel K. Chacko, Director of Basic Urological Research, Division of Urology, 3010 Ravidin Courtyard Building, University of Pennsylvania Medical Center, Philadelphia, PA 19104. University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available immediately for an NIH-funded project to study the structure-function relationship and regulation of expression of ribonucleotide reductase of the malaria parasite. This laboratory focuses on characterization of components involved in signal transduction and cell cycle regulation in *Plasmodium falciparum*. Ph.D. in biochemistry or molecular biology is preferred. Please send curriculum vitae with names and telephone/fax numbers of three references to: **Debopam Chakrabarti, Ph.D., Department of Molecular Biology and Microbiology, University of Central Florida, Orlando, FL 32816. Email: dchak@pegasus.cc.ucf.edu. An Affirmative Action/Equal Opportunity Employer.**

A POSTDOCTORAL/RESEARCH ASSOCIATE position is available to study the molecular embryology of lung development. Applicants should be experienced in molecular biology including RNA and DNA work and *in situ* hybridization. Salary and benefits are competitive. Opportunity for independent work and promotion. Contact: **Parviz Mino, Ph.D., Department of Pediatrics, USC School of Medicine, GLB at 1801 East Marengo, Los Angeles, CA 90033. Email: mino@hsc.usc.edu.**

ANNOUNCEMENT



NEUROBIOLOGY GRANTS

The Ara Parseghian Medical Research Foundation announces a major program initiative directed toward understanding the molecular basis of Niemann-Pick Type C (NP-C) disease, in the nervous system. NP-C disease is an autosomal recessive storage disease (which has been mapped to chromosome 18p) that primarily affects neurons. While biochemical defects involving intracellular cholesterol processing have been demonstrated in peripheral tissues, relatively little is currently understood about the molecular pathogenesis of NP-C disease with neurons. Of note, several mouse models of NP-C disease have been identified. The Foundation will initially fund meritorious research proposals for up to a two-year period, at a maximum of \$125,000 per year. Researchers (including those without past experience in NP-C disease) with a strong background in neuroscience, molecular biology, or cell biology are strongly encouraged to apply. Research should be targeted toward:

1) Characterizing the molecular basis of NP-C disease in neurons.
2) Elucidation of the mechanism(s) of nervous system injury and/or cell death in NP-C disease.

The upcoming application deadline is September 1, 1996 with funding to begin November 1, 1997. A review of relevant scientific literature is available through the Foundation for researchers new to the field who are interested in submitting a proposal. For information and application forms, please contact: **Grants Administrator, The Ara Parseghian Medical Research Foundation, 1760 East River Road, Suite 115, Tucson, AZ 85718. Telephone: 520-577-5106; FAX: 520-577-5212.**

**Leader of
the Division of
Atmospheric Chemistry**
of the

**Institute for
Tropospheric Research
(IFT)**

A temporary appointment is open for applications. It terminates at the retirement of the present disabled division leader. At that date, the appointment will be open for a permanent position as **C3-professor in Atmospheric Chemistry.**

Internationally recognised Ph.D. level chemists specialising in atmospheric multi-phase chemistry are welcome to apply. Applications directed to

Prof. Jost Heintzenberg
IFT, Permoserstr. 15
D-04303 Leipzig

will be treated confidentially but will not be returned.

**RESEARCH SCIENTIST
BACTERIAL
PATHOGENESIS AND
IMMUNITY**



Biopharmaceuticals

**OUR SUCCESS
IS YOUR
OPPORTUNITY!**

Applicants with experience in the study of the biology of host-pathogen interactions are invited to apply for a research position in a team working on the development of new and improved bacterial vaccines. The successful candidate must hold a Ph.D. degree and should have a minimum of 3 years post-doctoral experience. An interest in the molecular basis of bacterial pathogenicity and practical knowledge of bacterium-host interactions is essential. Experience in the study of the interaction of bacteria with the immune system would be preferred but applicants with other relevant experience will be considered.

The applicant would be responsible for supervising and planning the work of technical staff while at the same time being expected to make an active contribution at the bench. Duties involve the interpretation of the results of protection studies in animal models of infection and the development of in vitro assays for assessing prospective, protective antigens.

Our biomedical research centre located close to Vienna offers excellent research facilities and technical support and provides the opportunity to work within a small international team of motivated scientists. Immuno offers a competitive salary, benefits programme and compensation for re-location expenses.

Please submit a detailed Curriculum Vitae together with salary requirements and date of availability to:

Immuno AG, Personnel Dept.
Dr. Elisabeth Pullez
Industriestrasse 67, A-1221 Vienna



RESEARCH DEVOTED TO PEOPLE



**CENTRE
FOR HEALTH AND
POPULATION RESEARCH**

DIRECTOR

The International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) seeks to appoint its Chief Executive, designated Director, for an initial period of three years, starting between mid-1997 and mid-1998, which may be renewed for an additional term of three years.

ICDDR,B is a non-profit international medical research institution situated in Dhaka, Bangladesh. Established under a charter of the Government of Bangladesh, it is a premier international organization conducting research and training in diarrhoeal disease and related areas of public health, nutrition, and reproductive health. ICDDR,B aims to develop improved health programs through scientific research conducted in four major divisions—Clinical Sciences, Laboratory Sciences, Community Health, and Health and Population Sciences. The 1400 employees include 200 researchers coming from 13 countries. The Centre is supported by 21 countries; international organizations including WHO, UNICEF, and UNDP; and a variety of private foundations and corporations.

The post of the Director involves management of the Centre and guidance of its scientific research and programs within the context of the Centre's priorities and objectives. The Director is also responsible for creating institutional linkages both nationally and internationally, and for establishing rapport with the donors and the host country government.

The preferred applicant will have a high order of management skills, a distinguished record of health leadership, intimate familiarity with the issues of health and development, and spoken and written fluency in English. Specific experience in health research and training, and resource mobilization, would be advantages.

The compensation package offered is equivalent to an ASG/ADG in the UN/WHO system.

Interested persons may contact the Search Committee for further information (Dr. Ralph H. Henderson, Assistant Director General, World Health Organization, 1211 Geneva 27, Switzerland) but should in any case make contact with the Secretary to the Search Committee at the earliest opportunity (Director, Administration and Personnel, ICDDR,B, GPO Box 128, Dhaka-1000, Bangladesh. Phone: 880-2-603236, 880-2-883307, FAX: 880-2-871686, E-mail: mahbub%cholera@external.ait.ac.th).

This vacancy is open to applicants of either sex. Applications from women are encouraged.



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Applicants should have an outstanding scientific record in any aspect of virology. In particular, applicants focused at one or several of the following fields are encouraged: molecular aspects of virus-host cell interaction, molecular pathogenesis of viral infections, gene regulation of persistent or latent infections, and/or immunobiology of viral infections.

MTC is one of the newly formed departments at the Karolinska Institute joining the old, smaller departments of bacteriology, immunology, parasitology, tumor biology, and virology. At MTC there are 250 employees, visiting scientists, and graduate students working in new laboratory buildings and conducting research on molecular pathogenesis of bacteria, parasites and viruses, viral immunobiology, T-cell immunity, vaccine research, molecular oncology, cell-cell and cell-microbe adhesion, and gene regulation. We are aiming for a strong interaction between these disciplines.

For further information, contact **Professor Ingemar Ernberg**, phone +46-8-728-62-62, fax +46-8-31-94-70, email ingemar.ernberg@mtc.ki.se, or **Professor Klas Kärre**, phone +46-8-728-62-82, fax +46-8-30-64-38, email klas.karre@mtc.ki.se. Please submit your formal application with the following documents in 4 copies: 1) curriculum vitae; 2) verified list of qualifications; 3) a description of your scientific and pedagogic career including a) experience of scientific leadership, Ph.D. student supervision, experience of departmental administration and b) pedagogic credentials including student supervision and preparation of teaching aids; 4) an outline of plans for future research; 5) a complete list of published scientific papers; 6) reprints of your 20 most representative, selected publications.

As many of our professors are men, we encourage women to apply.

The formal application should have reached the Karolinska Institute no later than August 27, 1996, while all other documents (1-6), including the publications, should have reached the Karolinska Institute by September 23, 1996. Address: **The Registrar, Karolinska Institute, S-171 77 Stockholm, Sweden.**

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POSTDOCTORAL POSITION at Brigham and Women's Hospital (BWH), Harvard Medical School. Laboratory focus is the role of growth factors in mammalian ovarian follicular development and diseases, with emphasis on signal transduction and apoptosis. Ph.D., with strong background in molecular biology and cell culture required. Replies: **John Yeh, M.D., Associate Professor, BWH, 75 Francis Street, Boston, MA 02115. Telephone: 617-732-5178; FAX: 617-732-4144.**

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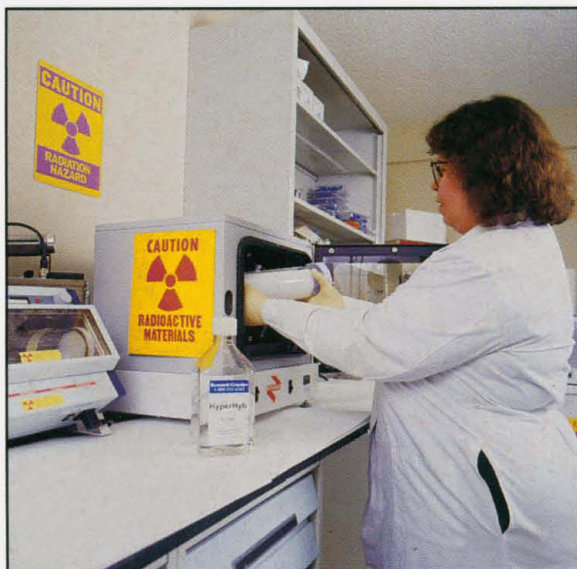
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