# New Books from Harvard

JOHN A. LOING CRAIG B. STAN

#### Chimpanzee and Red Colobus The Ecology of Predator and Prey

#### CRAIG B. STANFORD

WITH A FOREWORD BY RICHARD WRANGHAM This book, the first long-term field study of a predator-prey relationship involving two wild primates, documents a six-year investigation into how the risk of predation molds primate society. It offers a close look at how predation by wild chimpanzees in Gombe National Park in Tanzania has influenced the behavior, ecology, and demography of a population of red colobus monkeys.

25 halftones, 58 line illus., 37 tables • \$35.00 cloth

#### Perceptual Neuroscience The Cerebral Cortex

#### VERNON B. MOUNTCASTLE, M.D.

"This is a remarkable book by one of the most distinguished of modern neurophysiologists. It presents in a very clear light material that forms the foundations of neurophysiology but which rarely appears in textbooks today. This book will be of enormous value to all neuroscientists." —Edward G. Jones, President-Elect, Society

for Neuroscience, and Director, Center for Neuroscience, University of California, Davis 109 line illus, 9 halftones, 10 tables • \$59.95 cloth

#### Western Medical Thought from Antiquity to the Middle Ages

#### EDITED BY MIRKO D. GRMEK

COORDINATED BY BERNARDINO FANTINI TRANSLATED BY ANTONY SHUGAAR A landmark work by a group of international scholars, this cross-disciplinary history of medical thought from antiquity through the Middle Ages reconstructs the changes in theory and practice that marked the birth and early development of Western medicine. \$49.95 cloth

#### The Genetic Gods

Evolution and Belief in Human Affairs JOHN C. AVISE

"Avise explains thoroughly how evolution operates on a genetic level. His goal is to show that humans can look to this information as a way to answer fundamental questions of life instead of looking to traditional religious beliefs...Avise includes some very interesting discussions of ethical concerns related to genetic issues." —Eric D. Albright, LIBRARY JOURNAL 21 line illus. • \$29.95 cloth

#### Darwinism Comes to America RONALD L NUMBERS

Why do so many Americans still resist the ideas laid out by Darwin in *On the Origin of Species*? Focusing on crucial aspects of the history of Darwinism in America, the distinguished historian Ronald Numbers examines this question.

"[O]ffers major new insights for our understanding of how America responded to Darwin." —Peter J. Bowler, SCIENCE \$18.95 paper • \$39.95 cloth

#### Of Flies, Mice, and Men FRANCOIS JACOB

TRANSLATED BY GISELLE WEISS "[François Jacob] is one of the few scientists who write comprehensively and eloquently...If there were more books like this, genetics might not be under such an attack as it is now." —Benno Müller, NATURE \$24.00 cloth

#### The Birder's Bug Book GILBERT WALDBAUER

In The Birder's Bug Book Gilbert Waldbauer, a veteran entomologist and an accomplished birdwatcher, presents an excellent introduction to the intricate interplay of insects and birds, with a beguiling blend of anecdote, omithology, and entomology. The book is generously illustrated with drawings and color photographs. 35 color illustrations • \$27.95 cloth

#### **Epistemic Cultures**

How the Sciences Make Knowledge KARIN KNORR CETINA

KARIN KINORR CETINA

In this book, Karin Knorr Cetina compares two of the most important and intriguing epistemic cultures of our day, those in high energy physics and molecular biology. Her work highlights the diversity of these cultures of knowing and, in its depiction of their differences, challenges the accepted view of a unified science. \$22.95 paper • \$45.00 cloth

#### The Politics of Large Numbers

A History of Statistical Reasoning

#### ALAIN DESROSIÈRES

TRANSLATED BY CAMILLE NAISH In this sophisticated study of the history of statistics, which begins with probability theory in the seventeenth century and culminates in twentieth-century applied econometrics, Alain Desrosières shows how the evolution of modem statistics has been inextricably bound to the knowledge and power of governments. \$45.00 cloth

#### Dinosaurs of Australia and New Zealand and Other Animals of the Mesozoic Era

JOHN A. LONG

In this first comprehensive account of Mesozoic vertebrates from New Zealand and Australia, John Long shows that finds from such sites as Dinosaur Cove, Coober Pedy, Lightning Ridge, and the fossil trackways at Broome offer new and occasionally startling evidence that has the potential to challenge current views and reshape debate around some of paleontology's most hotly contested questions.

147 color illus., 245 halftones • \$39.95 cloth

#### H A R V A R D U N I V E R S I T Y P R E S S US: 800 448 2242 • UK: 0171 306 0603 • www.hup.harvard.edu

Circle No. 36 on Readers' Service Card

#### INSTRUMENTATION, APPARATUS, AND LABORATORY MATERIALS

# NEW PRODUCTS

#### LAMBDA KITS

Lambda Kits are designed for the purification of up to 300  $\mu$ g of ultrapure lambda DNA from liquid cultures or plate lysates. The lambda DNA is prepared using a polyethy-

Qiagen For more information call 805-295-7204 or circle 144 on the Reader Service Card lene glycol precipitation step followed by anionexchange chromatography. The lambda DNA selectively binds to a resin, and contaminants are removed by a wash step. This provides high yields

of lambda DNA free of protein and RNA. The lambda DNA obtained is suitable for automated or manual sequencing, polymerase chain reaction, and in vitro packaging.

#### **TISSUE DEPARAFFINIZATION**

EZ-DeWax Deparaffinization Solution is a reagent for dewaxing paraffin-embedded tissue sections prior to performing immunohistochemistry, in situ hybridization,

or other analytical methods. Paraffin-embedded tissue sections must be dewaxed prior to analysis to allow penetration by aqueous solutions. The conventional method consists of dipping the slides in

InnoGenex For more information call 925-543-1400 or circle 145 on the Reader Service Card

a series of baths of xylene and graded alcohols. EZ-DeWax is a xylene-free product for the deparaffinization and rehydration of tissue sections using a single reagent. The procedure requires only 10 minutes.

#### **ROBOTIC WORKSTATION**

The Flexys robotic workstation features a 24-pin pneumatic head. This tool can be used for picking colonies or plaques and for rearranging a full library. The pins fire at a rate of 4800 picks per hour, but pick-



ing speed depends on the sterilization protocol. Typically, the Flexys can pick 2000 colonies per hour when using a 10-s sterilization protocol. A charge-coupled device camera is used to visualize the colonies or plaques; the system

picks colonies ranging from 0.5 to 4.0 mm in diameter. The system enables sequential rearrangement of a fully identified library. Or it can select specific target wells and rearrange them into another set of plates for further analysis. The library can be re-arrayed from 96-well plates into 96well plates, 384-well plates into 384-well plates, 96-well plates into 384-well plates, or 384-well plates into 96-well plates.

Scientific

Industries

For more

information call

516-567-4700 or

circle 147

on the Reader

Service Card

#### MULTI-ACTION ROTATOR AND ROCKER

The Roto-Shake Genie is a versatile multi-action platform rotator and rocker. It is suitable for use in cold rooms and incubators. It performs membrane-based blot assays efficiently, and produces five different

mixing motions: rotating, rocking/shaking, rotating/rocking, rolling/rocking, and rotating/rolling, as well as a combination of



these actions. The stainless steel platform converts from rotating to rocking by a simple mechanical adjustment. The surfaces are magnetized to hold various sizes of autoclavable spring clip mounting plates as well as a removable non-skid metal rocker platform. To achieve a particular action, the user simply varies the position of the mounting plates on the platform.

#### SMALL PROTEIN AND NUCLEIC ACID SAMPLE PROCESSING

Spin-OUT Columns are a wide selection of spin columns for the rapid processing of small samples. Researchers simply apply the sample on top of the column and spin

Geno Technology For more information call 314-645-2050 or circle 148 on the Reader Service Card

top of the column and spin it briefly to collect the clean samples. These columns are suitable for removing salt, buffer exchange, unincorporated radioisotopes, dye, primer, and dNTP mix. The columns come in two sizes for 0.2- and 0.5-ml samples. Spin-OUT GT-600 Spin Columns have an exclusion size of 6000 molecular weight, which is suitable for purification of proteins and nucleic acids or oligonucleotides larger than 10 bp. Spin-OUT GT-1200 Spin Columns have an exclusion size of 12,000 molecular weight, which is suitable for purification of proteins, nucleic acids, or oligonucleotides larger than 20 bp. Spin-OUT-PCR is for cleaning polymerase chain reaction products.

#### LITERATURE

Engineered for Peak Performance in Recombinant Protein Expression is a comprehensive, technical product guide on an exten-

sive selection of systems, kits, and reagents. Key technical information is featured on a range of products, including FLAG protein expression system, tag removal kits, reporter

Sigma For more information call 800-282-1298 or circle 149 on the Reader Service Card

gene assay kits, protease inhibitor cocktails, affinity resins, fusion tag antibodies, transfection kits and reagents, transformation kits, and media supplements.

1999 Research Products Catalog features more than 55,000 products for life science and biotechnology research, development, and manufacturing, including biochemicals, radiochemicals, and re-



agents for cell biology, molecular biology, and immunology. A complete alphabetical listing is followed by individual chapters that organize products by research discipline, such as neuroscience, signal transduction, cell biolo-

gy, electrophoresis, and many others. It also provides literature references, applications information, protocols and procedures, and product hazard information.

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 of any products or materials mentioned is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Reader Service Card and placing it in a mailbox. U.S. postage is free.

# Forget the international acclaim, the career advancement, the money.

# Your mum will be proud VOU.

Science

The Award Committee Amersham Pharmacia Biotech & Science Prize for Young Scientists Enquiries from Europe – Science International, Bateman House, 82-88 Hills Road, Cambridge, CB2 H.Q, UK. Tel: +44 1223 326500, Eax: +44 1223 326501. Enquiries from USA and all other regions – Science, 1200 New York Avenue, NW, Washington, DC 20005 USA. Tel: 202-326-6553, Fax: 202-789-8172.

AMERSHAM PHARMACIA BIOTECH & • SCIENCE

Will it be your parents' turn this year?

The annual Amersham Pharmacia Biotech & Science Prize is one of the most prestigious international awards of its kind for young scientists. It can help achieve quite a lot for those who enter, putting bright, new scientific talent in the spotlight; bringing international acclaim to them and their universities; advancing their careers and earning winners and runners-up a handy cash prize (the first prize amount has been increased to \$25,000, with up to seven additional prizes of \$5,000).

#### **Call for entries**

You must be a recent Ph.D. graduate (awarded between 1 January and 31 December 1998) working in molecular biology. Submissions must be in the form of a 1000-word essay, in English, French, German, Spanish, Japanese or Mandarin Chinese, on your thesis, highlighting the significance of its contribution and overall implications in the field. The winning essay will be published in Science.

Closing date for entries is 15 June 1999. Prizes will be presented at an award ceremony in December 1999.

Full details and the required entry form can be requested from the administrator at the address below, or via these Web sites:

http://www.aaas.org/science/prize.htm http://www.apbiotech.com

#### Hiroyuki Noji

(Ph.D. awarded by Tokyo Institute of Technology), winner of the 1998 Amersham Pharmacia Biotech & Science Prize for Young Scientists.



Circle No. 20 on Readers' Service Card



#### **Classified Advertising**

To obtain information on rates, deadlines, editorial features, and bonus distribution schedules, call our sales office or visit *Science* Careers at www.scienceonline.org and click on "How to Advertise." All advertising is subject to publisher's approval.

#### UNITED STATES

#### **Display Classified Advertising**

Bren Peters Kristin Westapher Tel: 202-326-6541 Tel: 202-326-6555 Fax: 202-289-6742 E-mail: science\_displayads@aaas.org

#### Line Classified Advertising

Troy Benitez Kathleen Clark Tel: 202-326-6740 Tel: 202-326-6722 Fax: 202-289-6742

E-mail: science\_classifieds@aaas.org

Line ads are not agency commissionable. Ads submitted should not include any bold, italicized, or abbreviated words. *Science* will edit and typeset ads according to *Science* style requirements. *Science* cannot provide proofs of typeset line ads. *Science* will provide an estimated cost of line ads at time of placement. This is an approximate cost only. Please provide contact name, telephone, billing information, and purchase order numbers with your order.

#### **Online Classified Advertising**

Beth Dwyer Tel: 202-326-6534 Fax: 202-289-6742 E-mail: bdwyer@aaas.org

Every employment ad placed in *Science* will be featured in our job database online for 4 weeks. Call to find out how to link to thousands of additional job seekers online with *Science* Professional Network.

#### www.scienceonline.org

Ad Materials: Send to: *Science* Classified Advertising, 1200 New York Avenue, NW, Room 911, Washington, DC 20005

#### EUROPE

Line, Display, and Online Classified Advertising

Deborah Cummings Tel: +44 (0) 1223 326 500 Fax: +44 (0) 1223 326 532 E-mail: european\_ads@science-int.co.uk

Ad Materials: Send to: Advertising Dept., Bateman House, 82-88 Hills Road, Cambridge CB2 1 LQ, United Kingdom

**Discounts:** A 3% cash discount is granted to all prepaid ads.

**Credit Cards:** *Science* accepts American Express, MasterCard, and VISA. Discount does not apply to credit cards.

**Cancellations:** Deadline for cancellation is Tuesday, 10 days prior to issue date.

To **Subscribe** to *Science* call: 202-326-6417 or 1-800-731-4939

#### POSITIONS OPEN

#### FACULTY POSITION MOLECULAR GENETICS UNIVERSITY OF NEW MEXICO School of Medicine

The Department of Molecular Genetics and Microbiology at the University of New Mexico School of Medicine invites applications for a tenure-track faculty position at the ASSOCIATE/FULL PROFESSOR level. Applicants must have an advanced degree (Ph.D., M.D., or equivalent) and the potential to participate in collaborative research within the department (for department research interest see website: http://hsc.unm.edu/som/). Preference will be given to individuals with strong publication and teaching records, extramural funding, and research experience in molecular genetic and biochemical approaches to fundamental cellular functions, including gene regulation, and DNA/RNA dynamics (replication, recombination, mutagenesis, repair, and splicing). The applicant will be expected to direct a vigorous, externally funded research program and to participate in teaching of medical and graduate students. Interested individuals should submit a letter of application including a one- to two-page description of research interests, curriculum vitae, and the names of three references. For best consideration, applications must be received by June 15, 1999. Salary and rank will be commensurate with experience. New or renovated space and an attractive start-up package are available. Must be legally authorized to work in the United States. Send applications to: Molecular Genetics Search Committee, c/o Dolores Tarin, Department of Molecular Genetics and Microbiology, University of New Mexico, School of Medicine, Albuquerque, NM 87131.

UNM is an Affirmative Action/Equal Opportunity Employer and Educator.

#### RESEARCH ASSISTANT PROFESSOR

The Division of Pediatric Surgery at Duke University Medical Center invites applications for a position as **DIRECTOR** of the Pediatric Surgical Research Laboratory. Interested candidates should hold the Ph.D. degree and have had at least several years of postdoctoral experience. The current focus of the laboratory is the study of the genetics and molecular biology of neoplasms affecting children. Interested applicants should have expertise in all of the common molecular biological techniques. Particularly welcome are applicants with an established interest in the regulation of apoptosis and the relationship between neoplasia and abnormalities in programmed cell death signaling pathways. Responsibilities include the supervision of Research Fellows within the laboratory as well as the ultimate development of an extramurally funded research program. Contact: Dr. Michael A. Skinner, Division of Pediatric Surgery, Box 3815 Duke University Medical Center, Durham, NC 27710. FAX: 919-681-8353. Duke University is an Equal Opportunity Employer.

The Department of Biochemistry at the University of Kentucky has several full-time, tenure-track posi-tions available at the ASSISTANT PROFESSOR level. These positions are a part of a major expansion of the University in basic and clinical research. The successful candidates will be expected to develop strong independently funded research programs and to participate in departmental teaching activities. Areas of research interest in the department include cell cycle control; developmental regulation; signal transduction; membrane biogenesis, protein structure and function, transcriptional regulation; function and biological roles of processing proteases; DNA damage and repair; structure of viral replicases; protein chaperones; glycobiology; and vesicular transport and secretory complexes. Interested persons should submit their curriculum vitae, a summary of research interests, and letters of recommendation from at least three references to: Faculty Search Committee, Department of Biochemistry-607, University of Kentucky Medical Center, 800 Rose Street, Lexington, KY 40536-0298. An Equal Opportunity/Affirmative Action Employer.

#### POSITIONS OPEN

#### PROFESSOR AND DEPARTMENT CHAIR DEPARTMENT OF FISHERIES AND AQUATIC SCIENCES University of Florida

Applications and nominations are invited for the position of Chair of the Department of Fisheries and Aquatic Sciences. The Department, founded in 1984, has grown to 17 faculty and offers M.S., non-thesis Master's, and Ph.D. degees, plus an undergraduate minor. The Department has fresh water, coastal marine, and aquaculture research and extension programs, and has a young, diverse faculty specialized within ecology, physiology, veterinary medicine, and genetics. Particular strengths exist in water quality, the ecology of exploited species, reproduction of aquatic animals, and aquatic animal health.

The candidates (1) must have an earned Doctorate in an appropriate discipline and be eligible for tenure at the rank of Professor; (2) should demonstrate an exceptional record of scholastic and leadership abilities to foster the department's regional, national, and international programs; (3) must possess a strong commitment to administrative duties and responsibilities; and (4) must demonstrate a keen interest in fostering synergistic, collaborative relationships in support of the missions of a land-grant university.

Applications will close May 1, 1999. Nominations are requested by April 15, 1999. A complete application will include a letter of application with a statement of appropriate professional interests, a professional résumé, and the names, addresses, telephone numbers, and e-mail addresses for five references to be contacted. Applications, nominations, and inquiries should be directed to: Dr. William J. Lindberg, Search and Screen Committee Chair, Department of Fisheries and Aquatic Sciences, 7922 N.W. 71s Street, Gainesville, FL 32653-3071. Telephone: 352-392-9617, ext. 239; e-mail: wjl@ufl.edu.

The University of Florida is an Equal Employment Opportunity/Equal Access/Affirmative Action Employer. The "gouernment in the sunshine" laws of Florida require all documents relating to the search process, including letters of application/ nomination and reference, be available for public inspection.

#### ASSISTANT PROFESSOR PHARMACOLOGY Department of Pharmaceutical Sciences Campbell University School of Pharmacy

The Department of Pharmaceutical Sciences invites applications for a full-time faculty position at the Assistant Professor level beginning in June 1999. Applications will be accepted until the position is filled. The successful candidate should have a Ph.D. in pharmacology or toxicology, with expertise in antibiotic and antineoplastic pharmacology and experience with cellular/molecular biology methodologies. Teaching and postdoctoral research experience are desirable. The candidate will serve as part of a multidisciplinary team with responsibilities for teaching in undergraduate, Pharm.D., and graduate-level pharmacology and pharmaceutical sciences courses. The successful candidate will establish an active independent research program that incorporates undergraduate and graduate research training. The School of Pharmacy, a model program in pharmacy education, offers the entry-level Pharm.D. degree as well as a unique B.S. degree in pharmaceutical sciences. Campbell University is a private Christian University located approximately 35 miles south of Research Triangle Park in Central North Carolina. Its student-oriented focus facilitates excellent academic and professional interactions. Applicants should include a statement of teaching and research interests, curriculum vitae, and the names and addresses of three references to: Dr. James Junker, Chair, Pharmacology Search Committee, Department of Pharmaceutical Sciences, Campbell University School of Pharmacy, P.O. Box 1090, Buies Creek, NC 27506. Telephone: 910-893-1698; FAX: 910-893-1697; e-mail: junker@ camel.campbell.edu. Campbell University is an Equal Opportunity Employer.

	Symposium			
Scientist	Drug Delivery Symposium '99 June 15 - 18, 1999 Berkeley, California			
<b>Cardiomyocyte Signaling</b> Located in South San Francisco, COR Therapeutics, Inc. is a publicly-held biopharmaceutical company focused on the discovery & development of novel therapeutics for the treatment of severe cardiovascular disease. Our continued growth has created an excellent opportunity for an experienced Scientist.	<ul> <li>Learn about the most advanced drug delivery systems from the industry leader</li> <li>Up to 24 presenting companies <u>PLUS</u> keynote speakers and much more!!</li> <li>Genzyme </li> </ul>			
You will be responsible for an independent project on signaling mechanisms involved in cardiac myocyte hypertrophy and apoptosis as part of a program to develop drugs to be used in the treatment of heart failure subsequent to myocardial infarction. The position requires a Ph.D. in biochemistry, cell biology, molecular biology, or physiology; at least 2 years of relevant postdoctoral experience; background in cardiac myocyte cell biology/ physiology and signal transduction; and familiarity with signaling pathways which mediate MAPK/SAPK activation and/or apoptosis by G-protein coupled receptors. Experience in fluorescence microscopy and gene transfer (adenovirus or cell transfection methods) is desired.	<ul> <li>Dura / Nastech</li> <li>Aradigm / Southern Research</li> <li>Alkermes / Shearwater Polymers</li> <li>Endorex / West Pharmaceutical</li> <li>Altea Services</li> <li>ALZA</li> <li>See our web site for the latest list of participants: www.prochemist.com</li> <li>Delivery technologies for proteins &amp; small molecules:</li> </ul>			
COR Therapeutics, Inc. offers competitive salaries & benefits, and attractive equity positions. To apply, please send resume to: <b>COR Therapeutics, Inc.,</b> <b>Human Resources,</b> (Arrow Line appende SCF)	Fransdermal delivery     Pulmonary delivery     Oral delivery     Nasal delivery     Ocular delivery     Ocular delivery			
(Attn: Job# 99009-SCI), 256 East Grand Ave, South San Francisco, CA 94080 Fax: (650) 615-9639; Email: hr@corr.com. COR is an equal opportunity employer.	For further information contact: McAfee Consulting 609 Hilltop Court Kennedale, TX 76060 phone: (817) 483-4126 fax: (817) 483-7574 e-mail: cmcafee@prochemist.com WWW.prochemist.com			
	RPI, a leader in the development of ribozyme-based pharmaceutical products			
Research Scientist	and functional genomics, is currently seeking the following to join our research and devel- opment team in Boulder, Colorado: Scientist/Biology Seeking a Ph.Dlevel scientist with exten- sive experience in cellular and molecular biology. Will be responsible for developing cell culture systems and phenotypic assays for new gene targets. Experience in lipid- mediated oligonucleotide delivery to cells a			

strive to delight customers with quality innovative systems, products and services for the research, diagnostics and patient care markets. There are no limits to innovation at Roche Diagnostics. We are a global company whose objective is achieved through the efforts of qualified people. Individuals with a competitive spirit and commitment to Roche and its customers will be rewarded by challenging, professional development opportunities.

#### The position

An opportunity exists in our Patient Care New Technologies Group to provide new product and technology development in the field of implantable sensors. Responsibilities include utilizing outside and internal experts and technologies to create materials and processes suitable for maintaining the function of sensors in vivo.

#### Who you are

...an experienced Scientist who understands biocompatible materials and mass transfer in implanted devices. An advanced degree in Chemistry, Bioengineering or Materials Science, a solid grounding in electrochemistry fundamentals and experience in the fabrication and use of electrochemical and/or optical sensors are preferred.

#### Who to contact

We offer an excellent compensation and benefit program including 401(k). Qualified candidates should send a resume, including salary requirements to: Roche Diagnostics, Attn: Research Scientist - 411141, 9115 Hague Road, Indianapolis, IN 46250, or e-mail to Roche@webhire.com. Principals only please. Roche is committed to providing equal opportunity to a diverse workforce.

www.roche.com

anies <u>PLUS</u> ch more!! ile tech thern Research arwater Polymers st Pharmaceutical vices test list of emist.com proteins & ustained release iposomes ydrogels rodrugs tact: st.com nist.com evelopment of eutical products currently seeking search and develolorado:

#### ology

ntist with extenr and molecular le for developing henotypic assays perience in lipiddelivery to cells a plus. PCR/Taqman and/or ELISA design experience desirable. Must be an independent thinker with the ability to direct projects and interact with scientists from diverse disciplines. Applicants must have a Ph.D. or equivalent and at least 3 years of experience. Excellent communication skills required. Please refer to Job #021.

RPI offers a competitive salary and an excellent benefits package, including stock options. For consideration, send a curriculum vitae and the names of three references to: Ribozyme Pharmaceuticals, Inc., 2950 Wilderness Place, Job #021, Boulder, CO 80301. Fax: (303) 449-6995. E-mail: jobs@rpi.com

Visit our Web site at: http://www.rpi.com No phone calls, please. We are an equal opportunity employer.



## **PIONEER HI-BRED INTERNATIONAL, INC.**



## ... the plant genetics company.

Located near Des Moines, Iowa, Pioneer Hi-Bred's ninety-acre campus, including our recently completed laboratory expansion, offers a superb working environment. We currently have the following scientific opportunities available to suitably experienced, highly motivated individuals seeking to make an impact on the future of agriculture.

#### Ph.D. Level: Post-Doctoral Research Scientists M.S. or B.S. Level: Research Associates

## Understanding Insecticidal Proteins and Their Receptors (jobs #99077B & #98354B)

Join a large and diverse team of scientists committed to the development of insect-resistant crops. These positions offer the opportunity to apply your skills and creativity to exciting and fast- paced research. Successful candidates will assume key roles in a closely interacting group comprised of established molecular biology, protein biochemistry, and entomology labs. Research focuses on the rapid identification, isolation and characterization of insecticidal proteins, and on determining how those proteins interact with their insect targets at the molecular level. Protein engineering and directed evolution is used to improve the effectiveness of the insecticidal proteins in protecting transgenic crops against economically important pests. In addition, the biochemistry and physiology of insects is being studied in order to understand the mode of action of insecticidal proteins and to develop new approaches to controlling insects. Successful candidates will be expected to show initiative and team leadership, and a strong ability to present ideas and results to others.

Three post-doctoral research scientist positions are available (**job #99077B**). These positions require a Ph.D. in protein biochemistry, molecular biology, insect physiology or biochemistry, or a closely related field.

Two research associate positions are available (**job #98354B**). These positions require a M.S. degree, or a B.S. degree plus at least three years relevant experience, in protein biochemistry, molecular biology, insect physiology or biochemistry, or a closely related field.

Essential qualifications for all positions will vary depending on the research to be performed, but will include proficiency in the techniques of molecular biology, production and characterization of genomic and cDNA libraries and isolation of clones from them, and Southern, northern, and western blot analysis; and/or proficiency in the techniques of protein biochemistry, including purification of proteins from natural sources or expression systems, and methods for studying protein-protein interactions; and/or experience in studying insect physiology and biochemistry. Computer skills should include manipulation of protein and nucleic acid sequences, and protein/nucleic acid database analyses.

#### Research Manager - Molecular Biologist, Oilseed Disease Resistance (Job #99110B)

This individual will lead a gene discovery/evaluation effort in support of disease and nematode resistance in oilseed crops, with a particular emphasis on soybeans. The Research Manager will be expected to manage ongoing projects, initiate and coordinate novel gene discovery efforts, and establish key collaborations to identify new strategies. Genomics, proteomics, transcript imaging and functional analysis will be integral to this research program. The Research Manager will interact closely with oilseed mapping, transformation, and disease screening groups at Pioneer, and will benefit from close interactions with other gene discovery groups focused on disease resistance pathways in sunflower and maize. Requirements include a Ph.D. in the biological sciences and at least two years postdoctoral experience in plant molecular biology or the molecular biology of plant-pathogen interactions. Ability to work effectively in a team environment is essential. Pioneer Hi-Bred offers state-of-the-art facilities to support gene discovery research.



Pioneer Hi-Bred Int'l, Inc., is the world leader in the discovery, development and delivery of elite crop genetics.

We are committed to developing and incorporating both time-tested approaches and cutting edge technologies

that will continue to make our products superior to any in the industry. Pioneer's research programs, research collaborations, extensive germplasm base and advanced

work in genomics are unmatched by our competitors.

Pioneer employs more than 400 scientists, in an environment where individual achievements and team accomplishments come together to provide a rich and rewarding work experience. We strive to give each scientist the opportunity to make a difference...to be inventive and resourceful...to make a significant contribution.

Pioneer Hi-Bred is committed to competitive compensation and excellent annual reward systems plus a comprehensive bene-



fits package including 401(k), tuition reimbursement and relocation assistance. Des Moines is a prospering, growing city with diverse cultural, economic, industrial and consumer resources. It ranks well above the national average in quality of life including affordability and education

( www.smartcareermove.com ). For confidential consideration,

e-mail your resume and a cover letter, indicating job code to: (jobsresearch@phibred.com)

or send to: Human Resources, Pioneer Hi-Bred International, Inc. Research & Product Development 7300 N.W. 62nd Ave. PO Box 1004 Johnston, Iowa 50131-1004

#### http://www.pioneer.com



Pioneer Hi-Bred International, Inc. SM, TM Trademarks, registered or applied for, of Pioneer IIi-Bred International, In © 1999, PHII



Regeneron...we thrive on unique challenges. You'll thrive with us.



#### **Molecular Oncology**

Two research openings at levels commensurate with academic experience (Assistant Professor to Professor) in the Department of Pathology, Emory University School of Medicine. Candidates should have a background in basic science as it relates to cancer. There are no preferred sub-areas but approaches utilizing molecular cell biology and/or genetics preferred. Applicants should possess M.D., Ph.D. or M.D./Ph.D. degrees and some experience with or training in pathology is preferred but not required. Candidates are expected to have (or be able to develop, if just leaving post-doc) a strong NIH/NSF funded research program — thus candidates should qualify for funding from these sources. Individuals should be interactive with a record indicating productiv-

ity The Department is research intensive and provides an atmosphere of scholarship and collegiality at a Medical School with outstanding resources and facilities (including research cores), graduate students, interactive programs and Departments, and location. Applicants should submit a curriculum vitae and statement describing current and future planned research and arrange to have three letters of recommendation sent to: Dr. James L. Madara, W.P. Timmie Professor and Chair, Department of Pathology, Emory University School of Medicine, 1364 Clifton Road N.E., Room H184, Atlanta, GA 30322.

Emory is an Equal Opportunity employer and Wome and Minority Candidates are Encouraged to Apply.

## Living Skin Bank **Research** Associate

Required Qualifications: Ph.D with a minimum of two years experience in either protein and lipid biochemistry or in cell and molecular biology. Experience with tissue culture.

Preferred Qualifications: Experience in metabolic studies of retinoids and other lipid mediators, with epithelial cell biology and biochemistry, and with HPLC and protein purification.

Please send resumes to: Stony Brook University Hospital Human Resources, Three Technology Drive, UH# 7423 Suite 100, East Setauket, New York

Call (516) 444-4700 for a disability related accommodation.

employer



At Monsanto, we share a common goal-to help people lead longer, healthier lives. We are pioneering the use of life-science technologies to understand how the connections between human health, nutrition and agriculture can be used to develop products to improve the quality of life for everyone, everywhere. To achieve this goal, we are selectively hiring the best and the brightest people in the world-people who can make a difference and want to leave their mark. Imagine the possibilities-a better world, healthier families, a more enjoyable life. We are a team with a dream, and we would like you to be a part of it.

#### **AGRICULTURAL SECTOR - GENOMICS**

Monsanto's ability to move from gene to seed in an integrated environment ensures that scientists working at the cutting edge of genomics discoveries will realize the benefits of their contributions in the form of innovative new products in a global marketplace. We are seeking individuals that are committed to the application of genomics for abundant food and a healthy environment.

#### Genomics Team Leaders (2 openings)

Ag Genomics is seeking individuals to lead cutting edge genomics technology teams that are utilizing DNA microarray technology, and novel gene discovery methodologies in crop species and other targeted organisms. The team leaders will interface with gene discovery teams across the Monsanto Genomics technologies by facilitating the identification of pipeline leads for crop biotechnology traits. The successful candidates must be highly innovative, willing to lead by example and possess excellent interpersonal and communication skills. The individuals should be critical thinkers with demonstrated skills in planning, troubleshooting and interested in interacting with scientists across broad disciplines. The individuals should have a Ph.D. with 2+ years demonstrated successful

## Genome Molecular Biologist and Senior Genome Biologist (3 openings)

A number of new technologies and genomics capabilities have provided new insights to gene discovery and regulation. The utilization of high-throughput gene expression monitoring technologies and in silico sequence based electronic subtraction methods provides numerous tools to approach complex genome regulation questions. Regulation of gene expression is a central part of plant biotechnology and transgene manipulation. Understanding regulons (genes that are co-regulated) is also vital to understanding the function of genes and the basis of complex traits. We are looking for outstanding molecular biologists that have experience in gene expression that leads to understanding of genome regulation. Candidates must be innovative with the use of bio-informatics tools, must be strong at interpretation of experimental results and possess strong organizational skills. Candidates are required to have excellent communication skills and be able to work in a multidisciplinary team environment. Several positions are available requiring a range of experience. Minimum qualifications are a MS degree +2 years experience in a molecular biology discipline. Senior level positions are available and require a Ph.D. with 2+ years postdoctoral experience in molecular biology or molecular genetics. Training in molecular biology of plants is desirable. Preference will be given to individuals with demonstrated research interest and previous experience in plant gene expression. Job Code: GM01.

For consideration, for the above positions, please send resume to: Monsanto Life Sciences, Job Code (insert code from above), Mail Code: 02G, 800 N. Lindbergh Blvd., St. Louis, MO 63167. Fax: 314/694-2303.

#### MONSANTO CORPORATE RESEARCH

#### Team Leader, Gene Chemistry

The Team Leader will be expected to evaluate the emerging field of gene regulation via small molecules. The analysis will involve both a scientific evaluation as well as an assessment of best fit areas within Monsanto. The Team Leader will then be expected to establish an internal research effort with appropriate hiring, make decisions on external funding of academic research groups, and maintain contact with the several different approaches and programs underway. We are seeking a scientific leader with a Ph.D. having at least 3 years experience in chemistry studies at the gene level. Job Code: 3881.

#### **Bio-organic Chemist**

As a Bio-organic Chemist, you will contribute to a multidisciplinary team in exploratory research programs that interface with one or more of our life science businesses (Pharmaceutical, Agricultural, Nutrition). Success in this position requires creativity, experience in organic synthesis, a fundamental understanding of biochemical principles, exposure to molecular biology, and the enthusiasm to engage in the disciplines of a newly formed Life Sciences Company. The successful candidate should be a Ph.D. in Bio-organic Chemistry. Postdoctoral experience in a complimentary discipline is highly desirable. Job Code: 3882.

#### ANALYTICAL SCIENCES CENTER

#### **Biological NMR Spectroscopist**

Monsanto has an immediate opening for an NMR Spectroscopist in the Analytical Sciences Center of its Corporate Research group in St. Louis. This position represents a full-time, career opportunity in an open access NMR laboratory with more than a dozen modern NMR spectrometers serving a broad range of research and development needs of a life sciences company. The person filling this position will focus on problem solving using state-of-the-art biological NMR & MRI methods in collaborative pharmaceutical, agricultural and nutritional science projects. Additional responsibilities will include infrastructure & user support and the development of the laboratory facilities and its instrumentation.

The successful candidate should have a Ph.D. in biology, physiology or biochemistry, possess good computer skills, and have a basic understanding of spectroscopy and instrumentation. Experience in the application of NMR spectroscopy to biological problems and the operation of super-conducting NMR spectrometers is essential. A strong physiology background with some exposure to *in vitro/in vivo* NMR or MRI methods is desirable. The candidate also must be able to work well in a team environment, have good verbal and written communication skills, and possess clear potential for rapid growth and learning. Job Code: 3814.

#### Scientific & IT Applications Specialist

Monsanto has an immediate opening for a Scientific & Information Technologies Applications Specialist in the Analytical Sciences Center of its Corporate Research group in St. Louis. This position represents a full-time, career opportunity in an exciting, dynamic environment serving a broad range of research and development needs of a life sciences company. The person filling this position must be able to work well in a team environment, have good verbal and written communication skills, and possess clear potential for rapid growth and learning. We require a BS/MS/Ph.D. or equivalent experience in Physical Sciences with a strong computer programming and software maintenance background. UNIX programming experience in C and scripting languages, such as PERL and Tel/Tk, are considered essential. NMR applications experience is strongly desired. Experience with NT platform, laboratory automation and/or Laboratory Information Management System (LIMS) would be helful. Job Code: 3813.

#### LIFE SCIENCE INFORMATICS

We're putting together a team of top professionals who can work together to help us achieve our goals. You'll have a chance to make your mark and work with all aspects of our business relating to bio-informatics. This includes everything from pharmaceuticals to agriculture to genomics. It's silicon valley technology, right here in the Midwest. As you'd expect, our environment is cutting-edge and entrepreneurial. We can offer you the feel of a start-up and the resources of a global company.

#### **Bio-informatics Scientist**

The Bio-informatics team supports the development and implementation of high-speed, high-throughput information and biology technologies which comprise Monsanto's rapidly growing Genomics initiative. The candidate will become a member of the Bio-informatics/Applied Bio-informatics Team and will be expected to use knowledge of biology and computational skills to extract meaningful data from genomics information to identify leads and targets with biological significance for Monsanto's agricultural and pharmaceutical programs.

We require a Ph.D. in molecular biology, genetics or equivalent education and experience in a biological or hard science. At least 2 years experience in bio-informatics with a strong biology and computer background, especially in generating useful information from massive output of data generated by sequencing, genetic fingerprinting, mapping positional cloning, and/or transcriptional profiling efforts is essential. The candidate should have an in-depth knowledge of bio-informatics such as Smalltalk, C++, or PERL. Experience in a commercial environment and a record of publishing is a plus. Job Code: 99-315.

For consideration, for the above positions, please send resume to: Monsanto Life Sciences, Job Code (insert code from above), Mail Code: E2NB, 800 N. Lindbergh Blvd., St. Louis, MO 63167. Fax: 314/694-2014.

Please visit our website at: www.monsanto.com EEO/A A M/F/D/V



#### Department of Clinical Studies-Philadelphia School of Veterinary Medicine University of Pennsylvania Pamela Cole Career Development Chair Companion Animal Oncology

The University of Pennsylvania School of Veterinary Medicine is pleased to announce the creation of the Pamela Cole Career Development Chair in Companion Animal Medicine. The School invites applications for this tenure-track faculty position with specific emphasis in developing a career as a prominent clinician-scientist in oncology. The Pamela Cole Chair was conceived to provide research and salary support to a junior faculty member for a period of six years, or until tenure status is achieved. The individual chosen will be a key member of the Mari Lowe Center for Comparative Oncology and, as a team member, will act as a vital link between basic research and clinical oncology. The Recipient will have the opportunity to interact and collaborate with basic scientists and clinical oncologists in the School of Veterinary medicine as well as in the Cancer Center within the School of medicine. In addition, there are abundant opportunities to interact with f acuity at the Wistar Institute, the Institute for Human Gene Therapy and the Fox Chase Cancer Center. The recipient of the Pamela Cole Chair will be expected to develop an independent research program in an oncology-related area and will participate in the teaching of both veterinary and graduate students.

Candidates must have a veterinary degree and post-doctoral residency training. Preference will be given to applicants who are Diplomates of the American College of Veterinary Internal Medicine (Specialty of Oncology), or who are eligible for board certification in the ACVIM (Oncology). Salary and rank will be dependent upon the candidate's qualifications. Time out of clinic will be scheduled to permit study for board certification, research and other scholarly activities, depending upon the needs and interests of the candidate.

Interested applicants should direct questions or submit a letter of intent along with curriculum vitae and the names, addresses, phone, fax and e-mail information for three references to:

Dr. Gail K. Smith, Chairman Department of Clinical Studies-Philadelphia University of Pennsylvania School of Veterinary Medicine 3900 Delancey Street Philadelphia, PA 19104-6010

(Telephone) 215-898-6678, (Fax) 215-573-8183, (E-mail) smithgk@vet.upenn.edu The search committee will accept applications until June 15, 1999. The starting date is negotiable. The University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer.

#### Cubist Pharmaceuticals, Inc. <u>Research Scientist/Senior</u> Research Associate:

An immediate opportunity exists for a qualified professional to join a multidisciplinary drug discovery team to develop/validate/execute novel high throughput assays. Responsibilities include assay development, assay automation, high throughput screening and data management. Experience with Oracle and/or MS Access databases desirable. Strong communication skills and evidence of effective team interaction are required. Qualified candidates will have earned a BS/ MS/PhD and have 1-3 years of relevant experience.

Cubist Pharmaceuticals is a biopharmaceutical company focused on the research, development and commercialization of novel antimicrobial drugs to combat emerging strains of drug-resistant bacteria and fungi. At Cubist, we offer competitive compensation, outstanding growth opportunities and a comprehensive benefits package including group insurance, 401K and tuition reimbursement. Qualified candidates, please send your resume to:

> Human Resources Cubist Pharmaceuticals, Inc. 24 Emily Street Cambridge, MA 02139

We are an Equal Opportunity Employer. PLEASE VISIT OUR WEBSITE AT: WWW.CUBIST.COM

## Careers in Biotechnology & Pharmaceuticals A *Science* Advertising Supplement

## Issue Date: 7 May 1999 Space Reservation Deadline: 20 April 1999

#### Science helps you find the talent you need to compete.

Advertise in the special advertising supplement, Careers in Biotechnology and pharmaceuticals, to find the talent your company will need to compete in the next millennium.

#### **Bonus Distribution**

- American Society for Biology and Molecular Biology, 17-19 May, San Francisco, CA, USA.
- Biotechnology Industry Organization, 17-19 May, Seattle, WA, USA.

To advertise, contact: U.S. – Bren Peters (202) 326-6541 U.K. – Debbie Cummings +44 0 1223 326 500 Australia – Keith Sandell +61 29922-2977 Japan – Mashy Yoshikawa +81 3 3235-5961





# Growth through Discovery



Parke-Davis Pharmaceutical Research, a Division of Warner-Lambert Company, has demonstrated an excellent track record of innovation through the use of great science to discover drugs for unmet medical needs. These scientific accomplishments have perpetuated the growth of the organization and the need for world-class scientists to join its state-of-the-art research facilities in ANN ARBOR, MI. Our research facility is adjacent to the University of Michigan. This location offers a vibrant research environment and a very attractive residential setting and quality of life. If you are interested in continuing your professional development, please consider one of the following opportunities:

#### PATHOLOGY AND EXPERIMENTAL TOXICOLOGY

Pathology and Experimental Toxicology provides scientists the opportunity to belong to teams applying the most sophisticated and emerging technologies in the drug discovery and development process. Our scientists are recognized as leaders in their disciplines and are rewarded for individual and team contributions. To become a member of one of the most dynamic and leading toxicology groups in the biomedical research industry, see how the combination of your education, experience, and interests would contribute to one of the following positions:

#### CLINICAL AND MOLECULAR PATHOLOGY Senior Scientist/Biochemistry Job Code: CJM-99179

Pathology and Experimental Toxicology has an immediate opening for an individual with expertise in biochemistry, glucose metabolism, and enzymology. This person will develop and validate assays to support pre-clinical safety and investigative studies, as well as Phase I clinical trials. Emphasis will be on characterizing toxicologic mechanisms, and identifying surrogate markers of toxicity. The person selected will maintain an active basic research program, with publications in peer-reviewed journals, and act as a GLP study director. Applicants should have a PhD in Biochemistry, Molecular Biology, Toxicology, or a related field, with 3-10 years of relevant postdoctoral research training.

#### Senior Scientist/Clinical Pathology Job Code: CJM-99178

To meet growing demands and expand current testing capabilities, an individual is needed to provide clinical pathology expertise and develop new techniques for identifying toxicities in animal and human studies. Qualified candidates will combine an active research program with GLP-regulated study directing to contribute to Pathology and Experimental Toxicology goals. Applicants should have a PhD in Clinical Pathology, Biochemistry, Experimental Biology, Molecular Biology, Toxicology, or related field. A proven publication record and 3-5 years of relevant research experience are also required.

#### Senior Scientist Job Code: CJM/MRB

This is an immediate opening for a highly-motivated individual with nuclear magnetic resonance experience. This person will be responsible for developing, implementing, and overseeing NMR applications in toxicology studies and clinical trials. A strong, scientifically-based, research program using NMR is expected, as well as application of this technology to mechanistic studies and the drug development process. Applicants should have a PhD in Physics, Pharmacology, Toxicology, Bioinformatics, Biochemistry, or related field, with 3-5 years of relevant research experience.

#### GENETIC TOXICOLOGY Senior Scientist/Study Director Job Code: CJM-99209

This individual will design and conduct GLP regulated toxicology/safety assessment research projects in support of drug discovery and development initiatives. With expertise in genetic toxicology, the individual will evaluate in-house and contracted genetic toxicology research, monitor these studies and assist in in-house research programs. Applicants should have a PhD in Genetic Toxicology or a related field, 3-5 years of experience and broad familiarity with *in vitro* and *in vivo* genetic toxicology testing paradigms.

## SAFETY PHARMACOLOGY

#### Senior Scientist/Study Director Job Code: CJM/MRB

This individual will design and conduct GLP regulated safety pharmacology research in CNS, cardiovascular and pulmonary systems. The applicant should be proficient in utilization of pharmacology/physiology models, advanced radiotelemetry and computerized data acquisition and reporting systems. A program of research toward refinement of existing technologies and development of new capabilities is expected. Applicants should have a PhD in Pharmacology or Toxicology and 3-5 years of experience with expertise in intact animal research.

#### SAFETY ASSESSMENT Senior Scientist/Study Director Job Code: CJM/MRB

This individual will integrate key findings of toxicology studies and relevant data from other pre-clinical disciplines and published literature to provide a comprehensive assessment of safety relative to intended clinical evaluation and therapeutic use of drug candidates. This individual will also prepare responses to regulatory agency requests, and participate in the departmental scientific matrix as a Study Director. Applicants should have a PhD in Toxicology or related discipline, DABT certification, and 3-5 years of relevant experience preparing IND/NDA/MAA documents.

#### EXPERIMENTAL TOXICOLOGY Postdoctoral Fellow Job Code: CJM/MRB

This individual will investigate biochemical, cellular, and physiological mechanisms underlying drug-induced vasculopathy using a combination of *in vivo/in situ* models and *in vitro* organ bath/cell culture techniques. Experience in inflammation research, intact animal models and physiological techniques is highly desirable. Applicants should have a PhD in Pharmacology, Toxicology, or related field, and 0-2 years of postgraduate experience.

We offer competitive salaries, outstanding benefits, and an environment that's conducive to professional growth. For consideration, please forward your resume with Job Code, to: Parke-Davis, Resume Processing Center, P.O. Box 92242, Los Angeles, CA 90009-2242. Fax: 310-337-3367, E-mail: parkedavis@isearch.com.

#### www.parke-davis.com

Equal opportunity in action. Smoke-free work environment.



#### Building a winning team

IMAGINE a place where people are dedicated to a singular goal. IMAGINE a company intensely focused on building and supporting its PEOPLE.

> IMAGINE Pharmacia & Upjohn.

We are a global leader in the pharmaceutical industry, dedicated to helping people lead fuller and healthier lives. We are expanding on our success by BUILDING a winning **TEAM** of talented and **DR** I **V E N** people in research centers in Italy, Sweden, and the United States.

#### CELL AND **MOLECULAR BIOLOGIST** B.S./M.S.

The incumbent will work on identifying and characterizing novel therapeutical targets for neurodegenerative disease such as Alzheimer's Disease. This position requires an M.S. or B.S. degree in Cell and Molecular Biology. Ideally, the candidate should have at least two years of research training. Experience in characterization and functional study of novel

Pharmacia & Upjohn offers a competitive salary and benefits For confidential consideration, please send your resume to:

Pharmacia & Upjohn Position #990084 Staffing, 5003-24-0 7000 Portage Road Kalamazoo, MI 49001 Fax: 616-833-9655.

Or you may e-mail

genes is highly valued.

vour resume (no attachments, please) to: recruit@am.pnu.com. We are an equal opportunity employer with a commitment to workplace diversity.

Pharmacia & Upjohn

# Scientists with Disabilities

A Science Advertising Supplement

## Issue Date: 18 June 1999 Space Reservation Deadline: 1 June 1999

#### **Benefits for All Advertisers**

- Maximum exposure: Science delivers your message to nearly 157,000<sup>1</sup> subscribers and 600,000<sup>2</sup> weekly readers.
- Bonus distribution to the AAAS Resource Group.
- NEW! Free four-week online posting: All print ads are automatically placed online for four weeks at no additional cost.

Science December 1998 BPA Publisher's Statement

2 6 March 1998, 23 May and 18 July 1997 Harvey Research Science Readership Survey as applied to Science December 1998 BPA Publisher's Statement, publisher's own data

To advertise, contact: U.S. - Bren Peters (202) 326-6541 U.K. - Debbie Cummings +44 0 1223 326 500 Australia - Keith Sandell +61 29922-2977 Japan - Mashy Yoshikawa +81 3 3235-5961



More science. More scientists



VALENTIS, Inc.

interdisciplinary team environment.

www.valentis.com

infectious disease models vaccinated with DNA-based vectors. We seek a proven professional with a BS or MS, 1-3 years' relevant experience, and demonstrated expertise with immunological assays,

netic knowledge. Our rapid growth & continued success has created an exciting challenge for an experienced & dedicated researcher to join the genetic vaccines team at our state-of-the-art R&D center, located in The Woodlands, TX. As an integral member of this team, you will be responsible for characterizing the immune response in certain

including CTL, ELISA, and proliferation assays. Prior in vivo modeling

experience is a plus. In addition, candidates should have strong writ-

ten/verbal communication skills and be able to work in a fast-paced,

VALENTIS, Inc., offers highly competitive compensation and

benefits and the opportunity for career growth. For confidential

consideration, please submit resume (email preferred) to:

Help shape the future of medicine VALENTIS, Inc., a progressive biopharmaceutical leader headquartered in San Francisco, is currently developing several breakthrough, non-viral gene therapies that capitalize on the new broad front of ge-

Antigen Presenting Cell Platform

SCIENTIST

### **R&D PROFESSIONALS**

## NEW PRODUCTS ARE YOUR LIFEBLOOD.

OURS TOO.

When we at Johnson & Johnson ask "what's new?", we're not speaking casually. We're reflecting a belief we all share—innovation is key. Because it is our ongoing innovation of products that help people, like Risperdal and Retin-A, that leads to the ongoing success of Johnson & Johnson, the world's leading health care company.

If you have an intense desire to make our next innovation your claim to fame, the opportunity is now open at one of our many operating units.



The **R.W. Johnson Pharmaceutical Research Institute**, located in Raritan, New Jersey, conducts pharmaceutical research in therapeutic areas including anti-infectives, central nervous system, dermatology and oncology.

## Scientist/Sr. Scientist

Become a part of our prestigious Drug Discovery Research Organization, published in leading high impact scientific journals. The Growth Factors team is a diverse group seeking scientists with research interests in the area of hematology, oncology or diabetes. Solid expertise in signal transduction pathways, molecular pharmacology and animal model studies is a plus.

The ideal applicant will possess a PhD in Molecular Biology, Biochemistry or Pharmacology with 3-5 years' postdoctoral experience. Excellent communication, publication and computer skills, as well as the ability to work in a team environment, are essential. Successful candidates will discover new chemical entities which have an impact on kinases, phosphatases and proteases controlling growth and differentiation of cells. Job Code: 3159

### **Postdoctoral Scientist**

The Growth Factors team currently has a postdoctoral assignment, offering opportunities for publication in the area of hematology, oncology or diabetes. All assignments are 2 years and are renewable dependent upon performance. As a member of the team, you will contribute to the current drug discovery research programs and will assist in identifying new potential targets for assay development and screening. Job Code: 3160

## **Postdoctoral Scientist**

Applications are invited for a postdoctoral position at the Johnson & Johnson Skin Biology Research Center located in Skillman in central New Jersey. The applicant must have a Ph.D. in any discipline of the Biological Sciences with a strong interest in molecular genetics and excellent skills in all standard molecular biology techniques and computers. The selected candidate will work on an on-going positional cloning project, which involves use of a variety of techniques for gene identification and expression. Expertise in one or more of these areas of research is highly desirable: genetic linkage mapping, physical mapping techniques (contig construction using YAC and BAC vectors, radiation hybrid mapping), DNA libraries screening, differential gene identification, in-situ RNA hybridization, PCR, mutational and DNA sequence analysis. The candidate is expected to have good communication and interpersonal skills. Attending scientific meetings and publications in scientific journals is highly encouraged. The position is initially for two years with renewal for additional years depending on performance. Our facility is well equipped for research in molecular and cell biology with the latest automated genotyping and sequencing technology. The company provides excellent salary and benefits. We are located less than 10 miles north of Princeton. Please send curriculum vitae and the names of three references with phone/e-mail/postal address. DO NOT APPLY ON-LINE FOR THIS POSITION. Job Code: 3161

This, too is your lifeblood. A really competitive salary, lots of great benefits like medical/dental, a 401(k), a pension plan and a comprehensive wellness program. No wonder FORTUNE is always ranking us as one of "America's Most Admired Companies". Moms like us, too. Working Mother says we're one of the "100 Best Companies for Working Mothers." We strongly encourage individuals to apply on-line at **www.jnj.com**, but if you don't have internet access, please forward a scannable resume, noting operating unit and job code, to: Johnson & Johnson Recruiting Services, P.O. Box 16597, New Brunswick, NJ 08906-6597. And just when you thought we couldn't possibly sound any better, we're an equal opportunity employer totally committed to diversity.

ohnson «Johnson

FOR FURTHER DETAILED INFORMATION REGARDING JOB RESPONSIBILITIES, WE HIGHLY RECOMMEND YOU VISIT OUR WEB SITE.

www.jnj.com



research policies and programs for USDA's chief in-house science agency. This position is responsible for developing and overseeing a major genome research program on agriculturally important plants, animals and microorganisms.



For details, see www.ars.usda.gov/afm/hrd/ resjobs/d9e-9253.htm or call 301-504-1370. Announcement closes 5/17/99

This position is located in ARS Headquarters in Beltsville, MD.

USDA/ARS is an equal opportunity employer and provider

RESEARCH ASSOCIATE

The Department of Chemical Engineering seeks an

Research is collaborative under the JDFI Center for Islet

Requirements: a Ph.D. in chemical engineering, strong

publication record, and substantial background in tissue

engineering. Three or more years' experience required in as

many as possible of the following areas: asceptic technique,

monolayer and 3D cell culture with insulin-secreting tissue,

effect of hypoxia and hyperoxia on viability and glucose-

stimulated insulin secretion, cell encapsulation in alginate

and/or in planar diffusion chambers, and NMR spectroscopy for

Interested candidates should submit a resume and cover letter

To apply on-line: web.mit.edu/personnel/www/resume.htm

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

An Equal Opportunity/Affirmative Action Employer

**Non-Smoking Environment** 

web.mit.edu/personnel/www

assessing metabolism and energetic state of cells in bioreactors.

referencing Job No. 99-0248R to: James McCarthy, MIT Personnel, PO Box 391229, Cambridge, MA 02139-0013.

Transplantation at Harvard Medical School.

individual to work on the development of a bioartificial pancreas

comprised of alginate-encapsulated insulin-secreting tissue in a

planar immunobarrier chamber with in situ oxygen generation.



are actively recruiting for

#### **Faculty and Postdoctoral Research Fellows**

for outstanding candidates with backgrounds in Molecular Biology Molecular Pathology **Physics/Biophysics Cell Biology** 

Immunology **Biomedical Engineering** Mathematical Modeling Physiology

The Edwin L. Steele Laboratory (MGH/HMS) is committed to improving the detection and treatment of cancer through a better understanding of tumor pathophysiology, and the molecular and cellular transport barriers within tumors. We are actively recruiting for faculty and postdoctoral fellows to work in the areas of angiogenesis, transvascular transport, metabolic microenvironment, interstitial transport, or cell transport.

Individuals must possess a Ph.D. and/or M.D., appropriate research experience, strong organizational, interpersonal, communication, and computer skills and be prepared to work in a dynamic team environment. Applicants should send a C.V. indicating their area of expertise, a career statement and three reference letters to: Rakesh K. Jain, Director of Steele Laboratory for Tumor Biology, Dept. of Radiation Oncology, Massachusetts General Hospital, 100 Blossom St., Cox-7, Boston, MA 02114



For more information about the research activities of the Steele Laboratory, please visit our web site at: http://steele.mgh.harvard.edu

The MGH is an Affirmative Action/Equal Opportunity Employer. Applications from women and members of minority groups are encouraged.

#### FACULTY POSITIONS (RANK OPEN) DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING

#### UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Department of Materials Science and Engineering at the University of Illinois at Urbana-Champaign invites applications for regular, full time tenure-track or tenured faculty positions in the broad areas of materials research. Applicants with strong research and teaching capabilities in the areas of diffraction and/or imaging techniques utilizing x-rays, electrons or neutrons; ceramic engineering; metallurgy, or polymers will be given preference although applicants with research interests in other areas may be considered. To be considered for a tenured position, the applicant must have recognized national and international stature. Successful candidates will be expected to teach Materials Science and Engineering courses at both the undergraduate and graduate levels. Candidates will also be expected to develop an outstanding research program.

Applicants must hold an earned Doctorate in an appropriate field. Salary and rank will be commensurate with qualifications. The proposed starting date for these positions is August 21, 1999 or later. All applicants are asked to provide a professional curriculum vitae including teaching experience and interests, a list of publications, and an outline of a few pages describing their proposed program of research. Candidates for tenure-track positions should also request that three (3) letters of reference be sent directly to the department. Candidates for tenured positions should include the names, addresses, e-mail and telephone numbers of at least three (3) references. To ensure full consideration, applications must be received prior to June 30, 1999. Interviews may take place during the application period, but a final decision will not be made until after the deadline for applications

Applications should be addressed to:

**Chair, Faculty Search Committee** Department of Materials Science and Engineering 1304 W. Green St. Urbana, IL 61801 Telephone: (217) 333-1440 Fax: (217) 333-2736 Email: mse@uiuc.edu

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

# Wanted! Knowledge that improves...

Amersham Pharmacia Biotech is a major international biotechniques company; it provides innovative and leading-edge technology solutions to the problems faced by researchers and engineers aiming to discover and produce new drugs and therapies, faster and more cost-effectively than ever before. The company generates sales of approximately \$800 million annually and employs 4,000 people worldwide. Amersham Pharmacia Biotech is a joint venture by two leading international healthcare specialists - Nycomed Amersham plc and Pharmacia Upjohn Inc. Its operational headquarters are in Uppsala, Sweden. For further information, check out the website: www.apbiotech.com

#### Amersham Pharmacia Biotech is launching a new global postdoctoral programme

Amersham Pharmacia Biotech has always been at the forefront of bringing innovation to the life sciences. Now, through our new postdoctoral research programme, you have the opportunity to contribute directly to the development of technologies that will be of key strategic importance in the future. We can offer a challenging industrial environment together with active academic collaborations, that will enable you to translate your ideas into reality. Scientific publications will be encouraged. These projects will be for 1 year in the first instance, with a possible extension for a further year.

#### Projects in UK:

#### Novel bioluminescent probes Cardiff/Sussex

Carum/Sussex

Development of novel bioluminescent probes from semisynthetic luciferases in collaboration with a University department. You should have gained a PhD in synthetic organic chemistry, ideally with experience in heterocyclic and combinatorial chemistry.

Contact: Dr J.M. Kendall +44(0)1222 526054 e-mail: bob.kendall@eu.apbiotech.com

#### Long Wavelength Lanthanide Ion Probes Surrev/Cardiff

Exploiting the ability to modulate emission lifetimes of lanthanide ions for the use as signalling agents in a joint venture with the Molecular Probes Group (Dr. S. Faulkner and Prof. P. Sammes) at the University of Surrey, UK. Synthetic organic chemistry skills will be essential with experience in the relevant fields of metal chelating agents, lanthanides and fluorescence spectroscopy highly desirable. *Contact: Mark Briggs +44(0)1222 526040, e-mail: mark.briggs@eu.apbiotech.com or Prof. Peter Sammes +44(0)1483 876848, e-mail: p.sammes@surrey.ac.uk Dept. of Chemistry, University of Surrey, Guildford GU2 5XH* 

Send your application to: simon.voake@eu.apbiotech.com or Amersham Pharmacia Biotech, Cardiff Labs, Forest Farm Estate, Whitechurch, Cardiff CF4 7YT, UK

#### Projects in Sweden:

Multi-point affinity binding Uppsala

Exploitation of multi-point attachment, create larger interaction between ligands and target molecules. You are a PhD in synthetic organic chemistry and experience in combinatorial chemistry, solid phase synthesis and affinity binding. *Contacts: Jean-Luc Maloisel +46(0)18 165683 e-mail: jean-luc.maloisel@eu.apbiotech.com* 

#### Living radical polymerisation Uppsala

Construction of novel separation matricies. You are a PhD in synthetic polymer or in synthetic organic chemistry or in organic solid phase synthesis. Experience in living radical/ suspension/emulsion polymerisation is required.

Contact: Jan Näsman +46(0)18 165491 e-mail: jan.nasman@eu.apbiotech.com

Send your application to: nina.holm@eu.apbiotech.com or Amersham Pharmacia Biotech, 751 84 Uppsala, Sweden

#### Projects in USA:

#### High-speed high-throughput DNA analysis on microfabricated electrophoresis chips Sunnvvale

You are a PhD in molecular biology, biochemistry or analytical chemistry with experience in DNA analysis and strong background in analytical instrumentation. *Contact: Shaorong Liu* +1 800-800-4383 x 4835 e-mail: sliu@mdyn.com

Send your application to: Pofessional Staffing Molecular Dynamics, 928 E. Arques Ave, Sunnyvale, CA 94086, fax: 408/773-8343

Closing date for applications is May 14.

#### APEX-arrayed primer extension Piscataway

Addressing the requirements of re-sequencing, particularly in the area of genotyping. Development of enhanced methods and enzymes. You are a PhD in biochemistry or molecular biology with experience in biochemistry, particularly of polymerases, molecular biology, fluorescent sequencing or dye chemistry. *Contact: Dr. Shauna Brummett +1 216 765 5000 (ext 158), e-mail: shauna.brummett@am.apbiotech.com or Maria Davis +1 216 765 5000 (ext.117) e-mail:maria.davis@am.apbiotech.com* 

Send your application to: julie.guilford@am.apbiotech.com



## **Gene Expression Technologies Research Associate**

Genome Sequence Centre, BC Cancer Research Centre Vancouver, British Columbia, Canada

> The newly-established Genome Sequence Centre has as its Director, Dr Michael Smith with Dr Marco Marra as its Associate Director and Leader of the Genome Mapping & Sequencing Group, as well as Steven Jones as Leader of the Data Analysis & Informatics Group.

Interacting closely with researchers and clinicians at the BC Cancer Research Centre and the BC Cancer Agency, the Genome Sequence Centre has a mandate to deploy the resources and technology of a high-throughput genome mapping and DNA sequencing facility to advance cancer research, diagnosis and treatment, as well as to apply genome-wide analysis to other significant medical and biological problems

This key appointment requires an individual with extensive experience in RNA isolation and characterization as well as cDNA library construction. Experience with other gene expression technologies including serial analysis of gene expression (SAGE) and DNA micro-array analysis would be advantageous.

A self-motivated individual, you have highly-developed communication and interpersonal capabilities combined with the ability to work effectively in a group environment. Supervisory skills would be an asset. You ideally have a Ph.D degree in biochemistry, microbiology or genetics together with post-doctoral experience; however, very extensive laboratory experience in place of formal qualifications will be considered.

The salary and benefits package is competitive.

**BC Cancer Research Centre** 

SCIENTIFIC RESEARCH

given to Canadian citizens and permanent residents although all qualified persons are encouraged to apply. Please forward a curriculum vitae, quoting reference #BCSC1, by April 30, 1999 to: Human Resources, BC Cancer Agency, 400 - 555 West 12th Avenue, East Tower, City Square, Vancouver, BC V5Z 3X7, Canada; fax 604.877.6037.

FOCUS

JIMAI HEAITHCARE

## No phone calls, please. We are an Equal Opportunity Employer. In accordance with Canadian Immigration policy, priority will be

## M14627 **TENURE-TRACK FACULTY POSITION** ASSISTANT PROFESSOR

**Crump Institute for Biological Imaging** Department of Molecular and Medical Pharmacology **UCLA School of Medicine** 

The Crump Institute for Biological Imaging (www.crump.ucla.edu) is seeking a faculty member with research experience in the development of murine models of disease, and with a strong interest in biologi cal imaging. The individual we seek would have the ability to interact with diverse scientists who have come together to advance biological imaging through the merger of fundamental advances in molecular biology, cell biology, and manipulation of the murine genome with those in biological imaging. The Crump Institute faculty includes sci-entists with strengths in positron emission tomography (PET), mag-netic resonance imaging (MRI), cryo-Electron Microscopy, confocal microscopy, pharmacology, synthetic chemistry, nuclear medicine, molecular biology, imaging physics, and biomathematics. Active areas of current research which bring together various faculty include the repeated imaging of gene expression in living mice using microPET The ideal candidate will bring to the Institute skills in the development of murine models of disease and in molecular biology, and share with the members of the Institute an interest in imaging biological events in these animals in real time, in a non-invasive manner

Candidates should have a Ph.D. in Molecular Biology, Cell Biology Pharmacology, or another relevant field. Foremost, the applicant should be a highly qualified biologist with a strong desire to study biological models in vivo with rapidly evolving imaging modalities (e.g., PET MRI). Research experience in the development of disease models (e.g. knockout/transgenics) for biological imaging applications is preferred Exposure to in vivo imaging is preferred but not mandatory. The successful candidate will have made significant scientific contributions and will be expected to develop a well-funded research program. Teaching of graduate students and M.D./Ph.D. students is expected

Send curriculum vitae and a description of research accomplishments and plans to: Dr. Sam Gambhir, Chair, Faculty Search Committee, Crump Institute for Biological Imaging, UCLA School of Medicine, A-222 CIBI, PO BOX 951770, LA, CA 90095-1770. Applicants should also arrange to have three letters of recommenda tion sent to the same address

Pfizer scientists are involved in some of the most critical research in the world today. Recently voted Company of the Year by Forbes Magazine, we have established a product pipeline that is unparalleled and an intellectual, collaborative environment that inspires scientific achievement. Pfizer Inc.'s Animal Health Department is currently seeking candidates for the following position

#### SCIENTIST/RESEARCH SCIENTIST - BIOLOGICALS

In this position, you will purify and characterize proteins to support discovery projects in veterinarian biologicals as well as develop and employ methods for analytical characterization of natural and recombinant proteins to support analytical characterization of natural and recombinant proteins to support novel antigen identification and vaccine development. The successful candidate will have a minimum of a MS or equivalent in Biochemistry and 6+ years' experience, or a recent Ph.D. in Protein Biochemistry. Experience in protein purification and characterization, including protein chemistry analytical techniques, and experience with BioCad, Akta, Millennium and Biacore systems for purification and characterization as well as SDS-PAGE, Westerns, HPLC, LC, UV, IEF, fluorescencespectroscopy and circular diochroism are desired. Some knowledge of protein stability studies and vaccine formulation is also desirable.

Pfizer offers exceptional salaries and benefits, as well as tremendous growth potential. Please send your resume in confidence to: Pfizer Inc., Job Code #9923370SCI, Central Research, c/o Aon Consulting, P.O. Box 25, Findlay, OH 45839. As an Equal Opportunity Employer, Pfizer is focused on building a diverse workforce.







**SCIENTIST** 

**Functional Genomics** Atugen, an industry leader in providing

reagents and services to determine gene function and validate therapeutic gene targets, is currently seeking a scientist to

team of cell biologists in developing cell culture assays to examine gene function. The team will be responsible for internal

technology development and support of external collaborations. Qualified indi-vidual will have a Ph.D. and at least 3 years of related experience, including supervisory experience. Must possess

excellent communication skills and the ability to interact with an interdiscipli-nary team. A background in cellular and molecular biology is required. Experi-

ence in cell assay automation is a plus. Please refer to Job #031.

We offer a competitive salary and bene-

fits package, including a stock option plan. For consideration, please send a

curriculum vitae and the names of three references to: Atugen/RPI, 2950 Wilderness Pl., Boulder, CO 80301; fax: (303) 449-6995; e-mail: jobs@rpi.com

join our team in Boulder, Colorado. Highly motivated individual will lead a At Monsanto, we share a common goal - to help people lead longer, healthier lives. We are pioneering the use of life-science technologies to understand how the connections between human health, nutrition and agriculture can be used to develop products to improve the quality of life for everyone, everywhere. To achieve this goal, we are selectively hiring the best and the brightest people in the world - people who can make a difference and want to leave their mark. Can you see yourself working on our dream of helping to improve food, health and hope in the world? Do you think about what you can achieve and the difference you, personally, can make? All of us at Monsanto ask these questions daily. It's what brought us together and keeps us together. Imagine the possibilities - a better world, healthier families, a more enjoyable life. We are a team with a dream, and we would like you to be a part of it.

#### **RESEARCH ENTOMOLOGIST**

Working on a team to develop transgenic products for the control of corn insect pests, you will be responsible for the design and coordination of a variety of lab and field tests. As you will be a key decision-maker on the team, we require a Ph.D. (MS w/ appropriate experience) in Entomology, Biological Sciences or a related field. You must have sound knowledge of insect ecology and biology as well as a good understanding of recent advances in biotechnology. Experience in lab experimentation, principles of experimental design and statistical analysis are also essential. Strong communication skills, computer competencies and the ability to excel in a diverse, multi-disciplinary team-based research environment is necessary.

For consideration FOR THE ABOVE POSITION, please send your resume to: The Monsanto Company, Job Code: SCMG-3783, 700 Chesterfield Pkwy North, Mail Code: GG4C, St. Louis, MO 63198; Fax: 314737-7015.

#### SENIOR SCIENTIST

This position requires a self-motivated, creative scientist with a research background in the pharmacology of inflammatory disease processes, including the modulation of activity of inflammatory cells, cytokine production and inflammatory disease modification. You should have a broad mechanism-based understanding of these processes at the molecular, cellular and whole animal levels. Our Discovery Pharmacology group seeks to translate these mechanisms and skills into new therapeutic opportunities in diseases associated with inflammation or angiogenesis. You must be a Ph.D. in Pharmacology and have 6-10 years experience in the field. Experience in the pharmaceutical industry is preferred. You will need strong communication skills and the ability to excel in and contribute to a multi-disciplinary team focused on achieving objectives. Job Code: SP-MC

#### ENZYMOLOGIST

This position requires a skilled professional with a BS (MS preferred) and 3-5 years of academic or industrial experience in enzymology/protein purification. You should have broad knowledge of biochemistry as well as signal transduction biochemistry during immune cell activation in vitro. The technical skills necessary for success in this position include the development of enzyme assays, protein purification technology, column chromatography, electrophoresis, Western analysis and computer skills with an emphasis on data analysis and graphics. You must excel in a challenging team-based environment. Job Code: ENZ-CT

#### **MOLECULAR BIOLOGIST (BS/MS)**

You must have a BS/MS with 3-5 years of academic or industrial experience in molecular biologic techniques with broad training in biochemistry as well as signal transduction biochemistry during immune cell activation in vitro. Necessary technical skills include cloning, transfection technology, gel shift analysis, and other molecular applications for elucidation of signaling pathways. Computer skills with knowledge of database searching, data analysis and graphics is essential along with the ability to work well in a team-based environment. Job Code: MB-CT

#### POSTDOCTORAL TRAINING POSITION

We are looking for a recent or soon to be Ph.D. scientist trained in biochemistry, pharmacology, and/or lipid metabolism to dissect the role of lipid pathways in immune cell physiology and in vivo models of inflammation. Training in cellular immunology or cellular biology and tissue culture is required and training in arachidonic acid metabolism is advantageous. Please direct CV's with a list of 3 references and a cover letter detailing your experience and Scientific interests to Dr. Philip Needleman, Senior Vice President and Chief Scientist and Dr. Catherine Tripp, Senior Research Scientist. Job Code: PD-CT

For consideration FOR THE ABOVE 4 POSITIONS, please send resume to: The Monsanto Company, Job Code: \_\_\_\_(select from above), 700 Chesterfield Parkway North, Mail Code: BB5B, St. Louis, MO 63198; Fax: 314/737-6419.

> Monsanto offers a competitive salary and benefits package. EEO/AA Employer M/F/D/V.

> Please visit our website at: www.monsanto.com





#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY National Exposure Research Laboratory

The U.S. Environmental Protection Agency's National Exposure Research Laboratory in Research Triangle Park, North Carolina, is seeking qualified candidates to fill a variety of senior Human Exposure Measurements and Modeling research positions. The selected Principal Investigators will plan and conduct high priority human exposure measurements and modeling research in support of the Agency's Particulate Matter (PM), Food Quality Protection Act (FQPA), Dermal/Non-Dietary Ingestion, Biomarker, Pesticides and Persistent Bioaccumulative Toxics (PBTs), National Human Exposure Assessment Survey (NHEXAS), and Air Toxics programs.

#### Human Exposure Measurements Scientist (GS 13/14/15)

Primary responsibilities include: developing exposure measurements study designs; planning/conducting exposure field studies; analyzing, validating and interpreting exposure results; and reporting the results in the peer reviewed scientific literature.

Human Exposure Modeling Scientist (GS 13/14/15) Primary responsibilities include: developing and validating personal and population exposure and dose models; statistically analyzing available multimedia exposure data; developing inputs and exposure factors to multimedia exposure models; integrating microenvironmental pollution and multimedia exposure data with demographic and cohort-specific time-activity data; and reporting the study results in the peer reviewed scientific literature.

**Environmental Statistician/Modeler (GS 13/14/15)** Primary responsibilities include: conducting multipathway human exposure modeling research; conducting time activity and survey questionnaire research; and performing statistical analysis of multimedia, multipathway environmental measurement, human exposure, and exposure and physical factors data collected by various ORD field studies.

#### Statistician (GS 13/14/15)

Primary responsibilities include: developing statistical techniques for assessing exposures to environmental pollutants; developing statistically-defensible field exposure study designs/surveys; and analyzing, interpreting, and reporting environmental measurement, human exposure, time activity, and exposure and physical factor data collected by various ORD field studies.

Multiple full-time positions with full benefits (relocation expenses, health/life insurance, retirement, and vacation/sick leave) are anticipated to be filled with a salary range from \$56,951 to \$102,907 based on documented qualifications. U.S. citizenship is required. Candidates must meet the U.S. Office of Personnel Management qualifications requirements including specific educational coursework. Potential candidates are requested to submit their resumes documenting their past and current exposure assessment research, national and/or international recognition as a human exposure researcher, scientific publications, and other special qualifications to: Ms. Dianne Dean, US EPA, HEAB/HEASD/NERL, MD-56, Research Triangle Park, NC 27711, no later than July 2, 1999.

The U.S. EPA is an Equal Opportunity Employer.

#### **GLOBAL OPPORTUNITIES**



#### THE CHINESE UNIVERSITY OF HONG KONG Faculty of Medicine

The University (founded in 1963) offers comprehensive programmes up to PhD level, with student enrolment in 1998-99 standing over 12,000. The Faculty of Medicine offers undergraduate and postgraduate programmes in Medicine, Nursing and Pharmacy. The MBChB programme admits 160 students annually. Clinical courses are taught at the Faculty's 1,450-bed teaching hospital, the Prince of Wales Hospital (which is one of the regional hospitals in Hong Kong) and at the Lek Yuen Health Centre.

Applications are invited for the following post:

#### **Department of Surgery**

**Lecturer** (carrying the academic title of Assistant Professor or Associate Professor, as appropriate) (Ref. 99/026(665)/2) (closing date: 15 May 1999)

Applicants should have a PhD degree, several years' postdoctoral experience, a proven track record of scientific excellence, good communication skills (including demonstrated written and oral proficiency in English), and the ability to organize and motivate. Experience in molecular biology and/or immunology and/or cell biology and biochemistry is required. The appointee will supervise a research division of eight to nine technical staff, coordinate and assist in running on-going projects, as well as supervise postgraduate research students' studies. Experience in laboratory administration will be an advantage. Appointment will initially be made on a two-year contract, renewable subject to mutual agreement. The appointee is expected to assume duty in mid-November 1999 or as soon as possible thereafter.

#### **Annual Salary and Fringe Benefits**

Lecturer: HK\$554,280 to HK\$925,980 by 10 increments (approx. exchange rate in March 1999:  $\pounds 1 = HK$ \$12.55; US\$1 = HK\$7.75) Starting salary will be commensurate with qualifications and experience.

Benefits include leave with full pay, medical and dental care, and where applicable children's education allowance, housing benefit for eligible appointee (subject to the rules for the prevention of double housing benefits) and a contract-end gratuity (up to 15% of basic salary).

Further information about the University and the general terms of service for teaching appointees is available on our World Wide Web homepage <a href="http://www.cuhk.edu.hk">http://www.cuhk.edu.hk</a>>.

#### **Application Procedure**

Please send full resume, copies of academic credentials, a publication list and/or abstracts of selected published papers, together with names and addresses (fax numbers/e-mail addresses as well, if available) of three referees to the Personnel Office, The Chinese University of Hong Kong, Shatin, New Territories, Hong Kong (Fax: (852) 2603 6852) on or before **15 May 1999**. Please quote the reference number and mark "Application" on cover. [Note: The University reserves the right not to fill the post or to fill the post by invitation.]



#### ANNOUNCEMENT



NATIONAL INSTITUTES OF HEALTH

## Scholars Program

A Career Development and Training Program

For more details, contact: Maria Y. Giovanni, Ph.D Division of Extramural Research National Eye Institute 301-496-0484 my@nei.nih.gov Scientists with 5 years or less of postdoctoral training are eligible to apply.

NEI Scholars receive up to 4 years of support for laboratory or clinical research training at the NEI.

NEI Scholars then receive 2 years of grant support at an extramural institution.

NEI Web site: http://www.nei.nih.gov and click on "Funding Information" NEI Scholars must be U.S. citizens, non-citizen nationals, or U.S. permanent residents.





**Upstate BioTechnology, Inc.** is the established leader in biomedical reagents for cell signaling research located in Lake Placid, NY, the site of the 1980 winter Olympics, with a sales and marketing office in Boston, MA (www.Upstatebiotech. com). Our mission is to work with researchers in life sciences to identify and develop those reagents, which currently limit the pace of research. We are seeking outstanding candidates to fill the following two positions:

1) New Product Acquisition and Development Specialist. Primary responsibilities include acting as scientific liaison between academic researchers and internal staff and assist R&D Director to coordinate New Product Development activities. Candidates must have a M.S. in Biology with extensive hands-on experience with immunoblotting, immunoprecipitation, and enzyme assays. Must be proficient in English with good verbal, written and communications skills. Excellent personal skills are essential.

2) **R&D Technician.** Candidates must have more than 2 years experience in related field with a B.Sc. or a M.S. in Biological science. Experience with antibody purification and characterization using analytic skills including immunocytochemistry, immunoblotting, and immunoprecipitation is highly desirable.

Applicants should send a cover letter and resume to: Employee and Public Relations Department, Upstate Biotechnology, Inc. 199 Saranac Ave., Lake Placid, NY 12946. FAX (518) 523 1336. E-mail: nfinn@upstatebiotech.com. EOE

#### **Clinician-Scientist in Ophthalmology**

Applications are invited for a full-time retina clinician-scientist in patient care, teaching, and vision research to join a growing team of established investigators with vision related interests and a balanced ophthalmology practice. Responsibilities include independent and collaborative research with both basic scientists and clinicians, and medical student, postdoctoral and resident teaching and patient care. Candidates must complete an accredited ophthalmology residency, but applications will be accepted by candidates currently in ophthalmology residency or fellowship training. Candidates must be Board eligible at the time of starting their appointment and have a valid Washington State Medical license. Fellowship training in retina should be completed or planned. A solid background and foundation in basic research as evidenced by training and publication in scientific journals is required. A minimum of one-year postdoctoral research experience is required. Individuals with specific interests in retinal degeneration or molecular genetics are encouraged to apply. Exceptional candidates will be considered for The Ray and Grace Hill Endowed Chair. An appointment at the Acting Instructor or Assistant Professor level will be considered for applicants in training or recently out of training. Candidate with exceptional qualifications will be considered for appointment at the associate professor or professor level.

Applicants should send their curriculum vitae, a specific statement of research plans, and arrange for four letters of recommendation to:

Steven E. Wilson, MD Professor & Chair Department of Ophthalmology University of Washington School of Medicine Department of Ophthalmology, Box 356485 Seattle, WA 98195-6485.

The University of Washington is building a culturally diverse faculty and strongly encourages applications from female and minority candidates. The University of Washington is an Equal Opportunity/ Affirmative Action Employer.

#### POSITIONS OPEN

#### IMMUNOLOGY FACULTY POSITIONS ROSWELL PARK CANCER INSTITUTE

Under the leadership of a newly appointed Department Chair, the Roswell Park Cancer Institute is committed to the expansion of its immunology program. The Department of Immunology invites applications for four tenure-track positions equivalent to the AS-SISTANT, ASSOCIATE, and FULL PROFES-SOR level. Candidates are sought with special interest in tumor immunology to complement and broaden the expertise of existing faculty in the department. Specific research areas would include, but are not limited to, T cell activation, antigen processing and presentation, cytokines, and gene therapy.

Selection will be based on excellence in research and potential to maintain an outstanding independent research program. We encourage applicants who desire an environment that fosters interaction with a diverse group of scientists and clinicians both within the Institute and the State University of New York at Buffalo. Applicants should send a curriculum vitae, description of research accomplishments and future objectives, and the names and addresses of three references to:

#### Dr. Yasmin Thanavala, Search Committee Chair Department of Immunology Roswell Park Cancer Institute Elm and Carlton Streets Buffalo, NY 14263

RPCI is a Minorities/Females/Disabled/Veterans Affirmative Action Employer.

#### TENURE-TRACK FACULTY POSITION IN ECOLOGY DEPARTMENT OF BIOLOGY PENN STATE

The Department of Biology at The Pennsylvania State University (website: http://www.psu.bio. edu) has an opening for an Ecologist at the ASSIST-ANT PROFESSOR level (tenure-track) or HIGH-**ER RANK**, depending on qualifications. We are seeking a candidate with expertise in quantitative or theoretical ecology and whose interests complement existing research programs in our department. Successful applicants will be expected to develop an externally funded research program and to contribute to teaching at the undergraduate and graduate levels. The starting date is negotiable. Please send curriculum vitae, selected reprints, and statements of research and teaching interests, and have at least three letters of reference sent to: Dr. Austin Hughes, Search Committee Chair, Box S, Department of Biology, 208 Mueller Laboratory, University Park, PA 16802. Preliminary review of the applica-tions will begin June 1, 1999, but the position will remain open until filled. Affirmative Action/Equal Opportunity Employer.

#### **RETINA/VITREOUS/GENETICS**

Storm Eye Institute seeks candidates to fill two FACULTÝ POSITIONS. Retina/vitreous: Fellowship-trained Clinician and Investigator in the field of retina/vitreous. Board-certified. Senior physician with academic experience preferred. Excellent research collaboration opportunities. Retina/genetics: Full-time RESEARCH POSITION for Ph.D. or M.D. to conduct research in the area of retinal cell biology or ocular genetics of retinal diseases. Large patient base for clinically related studies. Preference will be given to candidates with existing grant support and productive publication record. Growing faculty of 17 in a recently expanded university eye institute. Rapidly growing practice, competitive salary, excellent benefits. Applications accepted until positions filled. Cover letter, curriculum vitae, and names of three references to: M. Edward Wilson, M.D., Chairman, Department of Ophthalmology, Medical University of South Carolina, 167 Ashley Avenue, P.O. Box 250676, Charleston, SC 29425. FAX: 843-792-1166. Equal Opportunity Employer/Minorities/Females/Disabled. Qualified minority, women, and disabled candidates are encouraged to apply.

#### POSITIONS OPEN

#### TENURE-TRACK POSITION LABORATORY OF CELLULAR AND MOLECULAR BIOLOGY

The Laboratory of Cellular and Molecular Biology (LCMB), Division of Basic Sciences (DBS), of the National Cancer Institute (NCI), National Institutes of Health has a long tradition of excellence in the investigation of signal transduction pathways involved in both normal cellular function and malignant transformation. The Laboratory now invites applications for a tenure-track position to study the Cell Biology of Signal Transduction. The applicant should have the potential to develop an independent basic research program in cellular and molecular biology, with emphasis on understanding basic signal transduction processes involved in normal or malignant proliferation. Preference will be given to candidates with expertise in the imaging of live cells. This position is available for a Ph.D., M.D., or M.D.-Ph.D. with a salary commensurate with education and experience. A one- or two-page statement of research interests and goals should be submitted in addition to three letters of recommendation and a curriculum vitae to: Ms. Michelle Porturica, Executive Secretary, Laboratory of Cellular and Molecular Biology, DBS, NCI, Building 41, Room A101, Bethesda, MD 20892-5055. Telephone: 301-435-2515; FAX: 301-435-2779; e-mail: porturim@dce41.nci.nih. gov. Candidates must be U.S. citizens or permanent residents. NIH tenure track Investigators with educational debts may be eligible for the NIH Loan Repayment Program. Applications to be post-marked by June 14, 1999. The NCI is an Equal Opportunity Employer.

Plant molecular genetics position available immediately (ASSISTANT, ASSOCIATE, or PROFES-SOR) to develop and maintain a nationally recognized basic research program emphasizing soybean molecular genetics. The successful individual will work with a strong team of plant breeders and other plant research groups within and outside the university. For additional information and full announcement, contact: Professor Arnel Hallauer, Search Committee Chair, Department of Agronomy, Iowa State University, Ames, IA 50010. E-mail: mlents@iastate.edu; Telephone: 515-294-7823. Closing date is May 31, 1999 or until suitable candidate is identified. Details available at website: http://www.iastate.edu/~hrs\_info/jobs/ 2academic.htm#993137.

Analytical chemistry. Cleveland State University invites applications for a tenure-track faculty position at the level of **ASSISTANT PROFESSOR** in analytical chemistry for fall 1999. The Department of Chemistry offers the B.S., M.S., and Ph.D. degrees. The Ph.D. program specializes in clinical/bioanalytical chemistry and is jointly administered with the Cleveland Clinic Foundation. Applicants must have a Ph.D. in chemistry or related field, be able to develop a nationally competitive research program, and be able to teach both undergraduate and graduate analytical chemistry courses. Postdoctoral experience and demonstrated accomplishments in research that complements existing expertise in the department (i.e., bioanalytical, biomedical, clinical, pharmaceutical areas) are preferred.

Qualified applicants should submit a curriculum vitae, a description of research plans, a statement of teaching experience and/or interests, copies of graduate transcripts, and arrange for three letters of recommendation to be sent to: Dr. Yan Xu, Chair, Analytical Chemistry Search Committee, Department of Chemistry, Cleveland State University, Cleveland, OH 44115. Review of applications will begin on June 1, 1999, and will continue until the position is filled. For further information, visit the Internet site at website: http://www.csuohio.edu. Or Telephone: 216-687-3991; FAX: 216-687-9298. Cleveland State University is an Affirmative Action/ Equal Opportunity Employer committed to nondiscrimination. Minorities/Females/Disabled/Veterans encouraged.

#### POSITIONS OPEN

#### ASSISTANT PROFESSORS DEPARTMENT OF ENVIRONMENTAL HEALTH SCIENCES The Johns Hopkins University

The Department of Environmental Health Sciences has openings for two tenure-track Assistant Professors. Applicants should have interests and accomplishments in the area of molecular toxicology or biomarkers research. Successful candidates will be expected to establish independent research programs ranging from molecular mechanisms of cellular injury to the development and application of biomarkers that are related to an important human health problem. The research interests of the faculty include chemical carcinogenesis, inflammatory processes, oxidative stress, DNA damage and repair, xenobiotic metabolism, mechanisms of signal transduction, chemoprevention, pulmonary smooth muscle regulation, health effects of air pollutants, determinants of host susceptibility, and molecular biomarkers. The successful applicant will have research interests and employ experimental approaches that complement one or more of these areas. The new Assistant Professors will also be expected to participate with the other faculty in Departmental teaching programs and mentoring of pre- and postdoctoral students. Interested candidates should send a curriculum vitae, a succinct statement of their research accomplishments and future plans for developing an independent research program, along with the names of three individuals who can be contacted for references to:

Molecular Toxicology and Biomarkers Search Committee c/o Kay Castleberry, Search Coordinator Department of Environmental Health Sciences, Room 1102 The Johns Hopkins School of Hygiene and Public Health 615 North Wolfe Street Baltimore, MD 21205

Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

**BIOINFORMATICS SOFTWARE ENGI-**NEER. Santa Fe, New Mexico. Create, design, and implement bioinformatics data models for Integrated Bioinformatics Information System; conceptualize algorithmic solutions of biology mechanisms and translate them into software applications; design, develop bioinformatics methods for biological data acquisition, storage, analysis, and integration, with objectoriented design; design, analysis, and implement bioinformatics software with Corba, Java, C++, Perl, Tcl/tk, Unix shell, and relational database Sybase or Oracle in the client-server Internet communication manner. Master's degree in computer science; two years of experience in job; must have two years of experience in life science research and biological data analysis with bioinformatics software tools; 40 hours per week; \$50,680.00 per year. Proof of legal authority to work in United States. Send résumé in duplicate to: NMDOL, New Mexico State Employment Service Office, 301 West DeVargas, Santa Fe, NM 87501 to the attention of Charles Pacheco, with a reference to Job Order #0426754

**BIOLOGY**. Full-time, one-year position for the 1999–2000 academic year to teach both semesters of introductory biology. Ph.D. preferred. Ursinus College, 25 miles northwest of Philadelphia, is a highly selective, residential, coeducational, liberal arts college of 1,250 students with a long tradition of strength in science. Laboratory facilities, supported by numerous grants from NSF and HHMI, are outstanding. Research not required for position but would be supported if it involved undergraduates. Send letter of application, curriculum vitae, and three letters of recommendation to: Dr. Robert Dawley, Department of Biology, P.O. Box 1000, Ursinus College, Collegeville, PA 19426-1000. Review of applications begins immediately and continues until position is filled. Ursinus College is Equal Opportunity Employer/Affirmative Action.

#### National Institutes of Health National Heart, Lung, and Blood Institute

Post-Doctoral Research Fellowship Positions

The Pulmonary - Critical Care Medicine Branch (P-CCMB), NHLBI

Post-doctoral research fellowship positions are available for individuals interested in cell and molecular biology, as well as bench to bedside translational research. Opportunities for post-doctoral research fellowships exist within intramural PCCMB laboratories investigating clinical and basic research relating to signal transduction, nitric oxide, G proteins, protein modification, vesicular trafficking and cyclic nucleotide phosphodiesterases. Positions are available for a minimum of 2 vears and may be extended for additional training. Candidates should possess a Ph.D. or M.D. degree or equivalent. Positions are available immediately. Interested individuals should submit a letter of interest, curriculum vitae, and three letters of recommendation to Joel Moss, M.D., Ph.D., Chief, Pulmonary-Critical Care Medicine Branch, NHLBI, NIH, Building 10, Room 6D03, MSC 1590, Bethesda, Maryland, 20892-1590.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

## Staff Scientist Analytical Services

ViroMed Biosafety Laboratories' newly created Analytical Services Dept., which provides GLP/GMP compliant contract testing services for the biotech, pharmaceutical, and medical device industries, has an opening for a Staff Scientist. Using state of the art equipment, you will be responsible for the planning and implementation of the overall testing strategy as well as assay development and validation for Analytical Services. In addition, you will serve as study director and interact with clients and regulatory authorities.

Qualified candidate will have an MS or PhD in the biological or chemical sciences plus 2 or more years' experience working in an analytical lab in a biopharmaceutical or contract testing environment. A strong background in GMP/GLP guidelines is highly desirable.

**ViroMed Biosafety** is located in the greater Philadelphia region - an area rich in scientific, cultural and recreational diversity. We offer excellent opportunities for professional growth, a competitive salary, relocation assistance, health benefits and a 401(k) plan. Send c.v. and salary requirements, to: **ViroMed Biosafety Laboratories**,

#### Attn: SAS499/R, Seetharam, 1667 Davis St., Camden, NJ 08104. FAX (609) 342-8078. EOE M/F/D/V

#### **GLOBAL OPPORTUNITIES**

#### Industry Department The Government of the Hong Kong Special Administrative Region

### <u>Vacancies for Senior Biotechnology Officer</u> <u>and Biotechnology Officer</u> (Non-Civil Service Contract Staff)

We are looking for suitable candidates to fill the vacancies of Senior Biotechnology Officer and Biotechnology Officer in the Industry Department of the Hong Kong Special Administrative Region.

#### **Duties:**

The Senior Biotechnology Officer and the Biotechnology Officer work as a team to carry out the following duties.

- (i) to provide technical advice on biotechnology-related matters;
- to examine and evaluate biotechnology-related project proposals and monitor the progress of approved projects under Industry Department's funding schemes;
- (iii) to provide secretariat and technical support to the Biotechnology Committee of the industry and Technology Development Council and its sub-committees;
- (iv) to implement programmes that facilitate the development of biotechnology-related industries;
- (v) to maintain regular contacts with local and overseas manufacturers, trade and industrial organisations, educational and training institutions and other relevant bodies in the biotechnology field; and
- (vi) to undertake ad hoc projects or studies in relation to biotechnology-related industries.

#### **Qualifications:**

Applicants should have:

- (i) a 1st or 2nd class honours degree in biotechnology, biochemistry, biology, or a related subject from a Hong Kong university, or equivalent. A higher degree in relevant disciplines is preferred; and
- ii) eight years' post-qualification experience in the relevant field for the post of Senior Biotechnology Officer and three years for the post of Biotechnology Officer. Experience in assessing the technical and commercial merits of projects in biotechnology-related fields and managing their operation is preferred.

#### **Terms of Appointment:**

Successful candidates will be appointed on 2 1/2 years non-civil service contract terms.

#### Salary:

HK\$917,820 per annum for Senior Biotechnology Officer and HK\$423,420 per annum for Biotechnology Officer.

#### **Fringe Benefits:**

- (i) A gratuity equivalent to 15% of the total basic salary drawn may be granted if the contract is satisfactorily completed with consistently high standard of performance and conduct.
- (ii) Rest days, statutory holidays (or substituted holidays), annual leave, maternity leave, sickness allowance, where appropriate, will be granted in line with the provisions in the Employment Ordinance of Hong Kong.
- (iii) A contribution to a Mandatory Provident Fund Scheme will be made where applicable, when Section 7A of the MPF Schemes Ordinance (Cap. 485), as amended by the Provident Fund Schemes Legislation (Amendment) Ordinance 1998, comes into effect in Hong Kong.

#### **Application Procedure:**

Application should be made in letter form together with a full C.V. giving details of personal particulars, education, and present and previous employment (copies of academic qualification certificates and record of previous employment should be provided). Applications should reach the Personnel Section, the Industry Department, Room 501, 5/F, Ocean Centre, 5 Canton Road, Tsim Sha Tsui, Kowloon, HONG KONG not later than **15 May 1999**. Candidates who are selected for interview will normally receive an invitation in about six weeks from the closing date for application. Only shortlisted candidates will be notified of the result of application.

#### POSITIONS OPEN

#### RESEARCH ASSOCIATES/ POSTDOCTORAL POSITIONS SIGNAL TRANSDUCTION

Three positions are available to study endothelininduced intracellular signaling pathways, cellular regulation of prostaglandin synthesis, and signaling through adaptor proteins. One position is to study mechanisms which link G-protein-coupled endothelin receptors to activation of MAP kinase signaling cascades (Foschi et al, "Biphasic activation of Ras by endothelin-1 ..." *EMBO J.* 16:6439–6451, 1997; endothelin-1 ... " *EMBO J.* **16:6439–6451**, 1997; **Dulin et al**, "RGS3 inhibits G protein–mediated sig-naling ... " *Mol. Cell. Biol.* **19:**714–723, 1999). The second position is to study the role of distinct intracellular signaling cascades in the regulation of cyclooxygenase 2 (COX-2) and COX-2-mediated gene expression (adenoviral-mediated gene transfer and screening of cDNA micro-arrays will be used). The third position is to study cellular regulation of signaling through adaptor protein Crk (Sorokin et al, "Crk protein binds to PDGF receptor and IRS-1 .... " On-cogene 16:2425–2434, 1998). Requirements include a " On-Ph.D. or M.D. degree and a sound background in biochemistry, cell biology, and molecular biology. Interested candidates should send their curriculum vitae plus names and telephone numbers of three references to: Andrey Sorokin, Ph.D., Medical College of Wisconsin, Cardiovascular Research Center, 8701 Watertown Plank Road, Milwaukee, WI 53226 E-mail applications can be sent to e-mail: sorokin@ post.its.mcw.edu.

#### SCIENCE DIRECTOR OF DIABETES RESEARCH

The Department of Pediatrics of the University of Pennsylvania School of Medicine at The Children's Hospital of Philadelphia, is recruiting a full-time M.D., M.D.-Ph.D., or Ph.D. laboratory scientist in the Division of Endocrinology with basic research related to diabetes, including insulin regulation or insulin action. The position is as ASSOCIATE or FULL PROFESSOR in the tenure track. Rank will be determined based on qualifications and background. Please send curriculum vitae to: Dr. Thomas Moshang, Jr., Division Chief, Endocrinology, The Children's Hospital of Philadelphia, 34th and Civic Center Boulevard, Philadelphia, PA 19104. The University of Pennsylvania is an Equal Opportunity/Affinnative Action Employer. Women and minorities are encouraged to apply.

**BIOINFORMATICS RESEARCH ENGI-NEER**. Santa Fe, New Mexico. Duties include collect and analyze genetic research data on gene sequence, expression, signal transduction, biological pathways, and other raw data by applying knowledge of bioinformatics, related tools, and algorithm; integrate data for multidisciplinary research projects. Master of Science degree in biology or microbiology with two years of experience in biological or bioinformatics research. Work 40 hours per week. Wage: \$46,731 per year. *Proof of legal authority to work in United States*. Send résumé in duplicate to: **NMDOL**, **New Mexico State Employment Service Office, 301 West De-Vargas, Santa Fe, NM 87501** to the attention of **Charles Pacheco**, with a reference to Job Order #0426750.

#### RESEARCH ASSOCIATE POSTDOCTORAL POSITION IN IMMUNOLOGY

A NIH-funded Postdoctoral position available immediately to investigate the role of TNF family members in the regulation of immune responses. Experiquired. Please send curriculum vitae and names of references to: Yang-Xin Fu, M.D., Ph.D., Department of Pathology, N401, MC6027, University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637. E-mail: yfu@midway.uchicago. edu. Affinnative Action/Equal Opportunity Employer.

#### POSITIONS OPEN



#### AMERICAN CHEMICAL SOCIETY INTERNATIONAL ACTIVITIES

The American Chemical Society (ACS) has a job opportunity in our International Activities Office working on issues related to Chemists and Chemical Engineers; analyzing/interpreting data on the international chemical enterprise; writing reports; coordinating projects; identifying funding sources; writing proposals; attending meetings; budgeting; and assist ing with office management. The ideal candidate will possess a degree in international relations or a related area and five years of related experience. A chemistry/ science degree or background is highly desirable. The job requires international travel. The ACS offers a complete benefits package. Send a cover letter, résume, and salary requirements to: American Chemical Society, Attn: ELM22-99, 1155 16th Street N.W., Washington, DC 20036. FAX: 202-776-8295. Visit the ACS website: www.acs.org. Equal Opportunity Employer.

#### GENE TARGETING SPECIALIST/ MOLECULAR BIOLOGIST ES CELL CULTURE

The Transgenic Mouse Facility of the Memorial Sloan-Kettering Cancer Center, headed by **Dr. Elizabeth Lacy**, seeks a highly motivated Research Specialist experienced in gene targeting and ES cell culture; genotyping of transgenic and targeted mice by Southern and PCR; and preparation/purification of transgene and targeting vectors. Requires two to three years of relevant experience. Animal husbandry experience also desirable. Candidates at all levels (B.S., M.S., and Ph.D.) will be considered.

Salary will be commensurate with experience. Interested individuals should send their curriculum vitae and the names and contact information of three references to: Employment Department, #99070.3R, Memorial Sloan-Kettering Cancer Center, 633 Third Avenue, 5th Floor, New York, NY 10017. Eaual Opportunity Employer/Affimative Action.

Equal Opportunity Employer/Affirmative Action. Memorial Sloan-Kettering Cancer Center. The Best Cancer Care. Anywhere.

BIOLOGIST. Davis and Elkins College invites applications for the tenure-track position of ASSIST-ANT PROFESSOR of biology to teach human anatomy and physiology, cell biology, histology, vertebrate physiology, and participate in the major's introductory biology sequence. Ph.D. in an appropriate field, a broad background in biology, and a demonstrated potential for effective college teaching are required. Davis and Elkins College is a small, private, church-related liberal arts institution. Further information regarding the College and the Biology and Environmental Science Department can be found at the website: www.dne.edu. Review of applications will begin May 1, 1999, and the position starts August 16, 1999. Interested candidates should send a letter of application including a statement of teaching philosophy, current curriculum vitae, and three references to: Dr. Laurence B. McArthur, Interim Vice President and Dean of Faculty, Davis and Elkins College, 100 Campus Drive, Elkins, WV 26241. An Equal Opportunity/Affirmative Action Institution.

#### **RESEARCH FELLOW**

**POSTDOCTORAL POSITION** available for study of ways to suppress the immune response to coagulation factor VIII in a mouse model of severe hemophilia A. Experience and significant accomplishments in mouse research on the mechanisms of development and suppression of immunity are required. Position funded by NIH grant to **Dorothea Scandella**, **Ph.D.** Submit curriculum vitae and three references to: **Dr. Scandella**, **Holland Laboratory**, **American Red Cross**, **15601 Crabbs Branch Way**, **Rockville**, **MD 20855**. Equal Opportunity Employer/Minorities/Females/Disabled/Veteraus.

#### POSITIONS OPEN

#### NMR SPECTROSCOPIST LABORATORY MANAGER TEXAS A&M UNIVERSITY

The Biomolecular NMR Facility at Texas A&M University invites applications for an NMR Spectroscopist/Laboratory Manager to play an integral role in the new High Resolution NMR Laboratory located in the Department of Biochemistry and Biophysics. The Laboratory houses two new four-channel Varian Inova spectrometers (500 and 600 MHz) both of which are equipped with triple-axis pulsed field gradient amplifiers and probes. It is anticipated that this individual will play a major intellectual role, collaborating with an expanding faculty in the area of NMR spectroscopy of proteins and nucleic acids. This individual will also help implement new multidimensional pulse sequences and periodically upgrade the NMR instrumentation. A Teaching Assistant will be available to help supervise and maintain the NMR spectrometers, and to train new users. Importantly, he/ she will be a member of the NMR users committee and be able to participate in policy-making decisions. The successful applicant will have extensive experience in maintaining and troubleshooting NMR spectrometer hardware. Expertise in maintaining, upgrading, and interfacing computer software and hardware is also a plus. A Ph.D. in chemistry or related field is highly desirable, although not required. Salary and benefits are highly competitive and depend upon the level of experience. Applicants should submit a curriculum vitae, and arrange to have three letters of reference sent to: Dr. David P. Giedroc, Faculty Director, High Resolution NMR Laboratory, Department of Biochemistry and Biophysics, Texas A&M University, College Station, TX 77843-2128. Texas A&M University is an Equal Opportunity Employer.

#### PLANT PHYSIOLOGIST/BIOCHEMIST

The National Research Initiative Competitive Grants Program of the U.S. Department of Agriculture seeks a qualified scientist to serve as **PROGRAM DIRECTOR** for grants administration in the area of plant physiology and biochemistry. Candidates must have an advanced degree with major study in one of the areas listed above or a closely related field. It is preferable that the candidate have a Ph.D. or equivalent specialized experience. Familiarity with plant molecular biology and plant genetics is required for this position. This is a competitive vacancy, *open to all United States differens*.

Closing date is May 17, 1999. Applicants will be evaluated against Quality Ranking Factors, which are detailed in the vacancy announcement. For information on the position, contact: Mr. Jeffery Conrad, Acting Division Director, National Research Initiative Competitive Grants Program, Cooperative State Research, Education, and Extension Service, USDA, STOP 2241, 1400 Independence Avenue S.W., Washington DC 20250-2241. Telephone: 202-401-6188; e-mail: jconrad@reeusda.gov. For information on application procedures/forms, contact: The Human Resources Division, Telephone: 301-344-3960. The Vacancy Announcement can also be obtained from the Human Resources Division or via the Internet, website: http://www.reeusda. gov/hrd/99-082.htm. USDA is an Equal Opportunity Employer.

#### RESEARCH FELLOW WASHINGTON, D.C. AREA

Two positions available immediately for Ph.D. Biochemist or Cell and Molecular Biologist to investigate structure and function of proteins involved in cell adhesion and extracellular matrix interactions. Previous experience in protein expression and transfection desirable. Send curriculum vitae and names of three references to: K. C. Ingham, American Red Cross Holland Laboratory, Rockville, MD 20855-2743. Equal Opportunity Employer/Minorities/Females/Disabled/ Veterans.

#### Postdoctoral Fellowship in Renal Diagnostics and Therapeutics

Several positions are available to use animal, genomic and translational approaches to find novel methods to detect and treat acute renal failure. Several projects are already in clinical trials. Major interests include alpha-MSH, IL-10, inflammation, rapid renal function tests, and informatics. Experience in tissue injury/repair, molecular or cell biology, or clinical research desirable. Position available June 1999. Applicants must have a M.D.and/or Ph.D. Please send CV, research interests, and names of 3 references to:

Dr. Robert Star, Renal Diagnostics and Therapeutics Unit, Metabolic Diseases Branch, Building 10, Room 3N110, 10 Center Drive MSC 1268, Bethesda, MD 20892-1268. Voice (301) 496-3092. Fax (301) 402-0014. E-mail: robertst@intra.niddk.nih.gov GLOBAL OPPORTUNITIES

THE HOWARD FLOREY INSTITUTE OF EXPERIMENTAL PHYSIOLOGY AND MEDICINE

#### **MELBOURNE, AUSTRALIA**

## HOWARD FLOREY INSTITUTE SENIOR RESEARCH FELLOWSHIPS

We are seeking outstanding scientists who wish to establish a research career in Australia in the general field of neuroscience, especially:

- Neurochemistry
- Neural Development
- Genomics

It is expected that the candidates would have relevant research experience at the postdoctoral level and have a substantial record of publications in the relevant area of research in leading international journals, demonstrating leadership, innovation and achievement.

The Howard Florey Institute is a leading biomedical research institute with an increasing focus in the neurosciences, and is situated on the campus of the University of Melbourne. The Institute has available state-of-the-art facilities in molecular biology, peptide and protein chemistry, and functional neuroimaging. The Fellowship, tenable for 5 years, will provide \$A150,000 per annum towards the Fellow's salary, technical and operating costs. The level of appointment will be commensurate with experience.

Details of the position and further information about the Institute can be obtained by contacting the Director. Applications should include a detailed curriculum vitae, an outline of research interests and future plans, and the names of 3 referees, and be addressed to:

Professor F. A. O. Mendelsohn, Director, Howard Florey Institute, University of Melbourne, Parkville, Melbourne, Victoria, Australia 3052. Email: faom@hfi.unimelb.edu.au Web page: http://www/hfi.unimelb.edu.au Phone: (613) 9344 7333. Fax: (613) 9348 1707. Closing date: 31 May 1999.

#### UNIVERSITY OF PENNSYLVANIA

#### CHAIR OF THE DEPARTMENT OF COMPUTER AND INFORMATION SCIENCE

Recommendations and nominations are invited for the Chair of the Department of Computer and Information Science at the University of Pennsylvania. The Department has outstanding programs and superb research facilities in algorithms and computational biology, computer graphics and animation, computer vision and robotics, databases, logic and computation, natural language processing, networks and distributed systems, programming languages, and real time systems. In addition the Department is central to several interdisciplinary initiatives across the University through the Institute for Research in Cognitive Science (IRCS), jointly sponsored with the School of Arts and Sciences, and the Bioinformatics Center, sponsored by IRCS and the Institute for Medicine and Engineering (IME).

The University is seeking candidates with distinguished research backgrounds interested in leading a significant increase in the size and scope of the Department over the next several years. Since the Department has been selected as one of the six thrusts of the University's Agenda for Excellence, the new Chair will oversee substantial growth in faculty size and construction of its new building.

The Committee will now begin reviewing applications; the search will remain open until the position is filled. Recommendations and applications, accompanied by a CV and appropriate supporting materials, should be sent to:



Real Property and the second

The University of Pennsylvania is an Equal Opportunity/ Affirmative Action Institution

#### **GLOBAL OPPORTUNITIES**



#### RIKEN Brain Science Institute, Japan LABORATORY FOR MOLECULAR PSYCHIATRY STAFF SCIENTIST

TMPV9524

This newly established laboratory invites applications for positions to study the molecular genetic mechanisms of psychiatric diseases. The research fields include linkage analysis, positional cloning, systematic genome analysis and functional analysis of candidate genes, and QTL mapping approach to animal behavioral traits. The RIKEN Brain Science Institute is a rapidly growing international research center located near Tokyo, Japan. Over 27 laboratories are engaged in molecular, cellular and system level investigations of the nervous system. The positions are well-funded and renewed annually for up to five years.

Applicants should have a Ph.D. and experience in at least one of the following areas: molecular biology, genome research, molecular genetics.

Candidates should submit a full curriculum vitae with two references to: Dr. Takeo Yoshikawa, Laboratory for Molecular Psychiatry, Brain Science Institute, RIKEN, 2–1 Hirosawa, Wako-shi, Saitama 351-0198, Japan

FAX: 81-48-467-9627, e-mail: takeo@brain.riken.go.jp

Closing date: 31 May 1999.

#### POSITIONS OPEN

#### RESEARCH ASSOCIATE FLOW CYTOMETRY MICROBIOLOGY

The Institute of Marine Science seeks a qualified scientist to operate a leading facility in the analysis of small cells, particularly marine bacteria, by flow cytometry. Minimum qualifications include a Bachelor's degree in microbiology or related sciences, demonstrated ability in advanced instrumentation; additional degree(s) are preferred. Duties include all aspects of flow cytometry operation and development, participation in research programs and field work involving aquatic microorganisms. Independent initiatives are encouraged. Beginning salary is \$16.46 per hour. For questions regarding this vacancy please contact: Dr. D. K. Button, Telephone: 907-474-7708; e-mail: dkbutton@ims.uaf.edu. For a more complete job description please access the following website: http:// uafjobs.alaska.edu/jobs/Exempt.html. Send curriculum vitae to: Juan A. Goula, School of Fisheries and Ocean Sciences, Room 245 O'Neill Building, University of Alaska Fairbanks, Fairbanks, AK 99775-7220. The University of Alaska is an Affir-mative Action/Equal Opportunity Employer and Educational Institution. In our efforts to diversify, we encourage applications from women and members of culturally diverse groups. Candidates must be eligible for employment under the Immigration Reform and Control Act of 1986. Your application for employment may be subject to public disclosure should you be selected as a finalist.

#### SYSTEMATIC ENTOMOLOGIST CALIFORNIA ACADEMY OF SCIENCES

The California Academy of Sciences invites applications for a regular faculty position (10-month annual basis) of **ASSISTANT CURATOR** of entomology. Individuals are sought who (1) have primary interest in, and commitment to, collection-based research in systematic entomology (including arachnids and myriapods); (2) are familiar with, and capable of employing, a range of systematic methods and techniques (e.g., comparative morphological, molecular, phylogenetic, and historical biogeographic analyses) in their research; (3) have interest and experience in field work; and (4) will contribute to the development and curation of a major collection of worldwide scope and use. Candidates must have a Ph.D. and an active research program. Responsibilities include original research, and participation in curatorial, administrative, and educational activities of the Academy. Detailed position description and other information are available through the Academy's website: www. calacademy.org/research. Applicants should forward a curriculum vitae, description of research goals, and the names, mailing and e-mail addresses, and telephone and FAX numbers of three references to: Human Resources #ACE, California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118-4599. Deadline for applications is September 1, 1999.

**POSTDOCTORAL FELLOW**. Applications are invited for immediate Postdoctoral Fellowships in cancer biology and genetics and hematopoietic stem cell development. Candidates must have a Ph.D. or M.D. with laboratory experience in molecular biology and protein analysis. Studies will examine the genetic regulation of cell growth and differentiation in normal and malignant tissue. Submit curriculum vitae and the names of three references to: Mike Clarke, University of Michigan Medical School, 1500 East Medical Center Drive, 4-310, CCGC, Box 0936, Ann Arbor, MI 48109-0936. FAX: 734-763-4226. An Affinnative Action/Equal Opportunity Employer.

#### POSTDOCTORAL FELLOW

Postdoctoral position in Department of Pharmacology/Tulane Cancer Center available immediately for study of oxygen-regulated gene expression. Ph.D. required, graduate training in molecular biology is essential. Excellent salary and benefits. Send curriculum vitae to: Dr. Barbara Beckman, FAX: (504) 588-5283; e-mail: bbeckman@tmcpop.tmc.tulane.edu.

#### POSITIONS OPEN

#### ENVIRONMENTAL HEALTH SCIENTIST EPIDEMIOLOGIST

The National Center for Environmental Assessment–Cincinnati (NCEA-CIN) of the U.S. Environmental Protection Agency is seeking candidates for an Environmental Health Scientist (Epidemiologist) position, GS-12/13 (\$48,995 to \$75,741 per year, based on qualifications) located in Cincinnati, Ohio. The principal duties are to serve as a scientific leader and interdisciplinary team member for research in environmental epidemiology; prepare evaluations of complex technical issues for risk assessment; apply epidemiological methods for estimating effects in humans; contribute to the development of epidemiological methods for health risk assessments; and provide technical assistance on the application and utilization of epidemiologic data and information.

The applicant must have a Ph.D. or equivalent degree with a major field of study related to the health sciences appropriate to the work of the position and one year of specialized experience in epidemiology research.

Please submit a résumé, transcripts, SF-171 or OF-612 (current and former Federal employees must submit a copy of their last SF-50) by May 14, 1999, to: Jessie Hopkins, U.S. EPA, (Mail Code 3653) 401 M Street S.W., Washington, DC 20460. Telephone: 202-260-2965. EPA is an Equal Opportunity/ Affirmative Action Employer.

#### POSTDOCTORAL POSITION AT BOSTON UNIVERSITY GENE EXPRESSION DYNAMICS

Available immediately to develop gene networks capable of precisely controlling the temporal expression of therapeutic genes in gene therapy applications. Applicant will work with Molecular Biologists, Physicists, Mathematicians, and Biomedical Engineers in the Center for BioDynamics and the Center for Advanced Biotechnology to design, build, and analyze the gene networks. Applicants must have a Ph.D. or M.D. and be experienced in eukaryotic cell culture and transfection, microscopy, and standard recombinant DNA techniques. Experience with viral-, liposome-, or receptor-mediated gene transfer techniques is also desirable.

Position available for one to three years. Applicants should send a brief statement of past and current research interests, a curriculum vitae, and names of three references to: Dr. J. J. Collins, Boston University, 44 Cummington Street, Boston, MA 02215. E-mail: abl@bu.cdu.

**POSTDOCTORAL ASSOCIATE**. Position available for Biochemist or Organic Chemist in a diverse laboratory to study the effect of ultrasound on organic molecules. Requires a Ph.D. in biochemistry, chemistry, biotechnology, biophysics, or related field. Extensive experience in one or more of the following areas is desirable: mass spectroscopy, HPLC, or peptide purification. Position especially suited for an individual with a strong background in quantitative biochemistry and technology development. Send curriculum vitae, letter of interest, and names of three references to: Dr. David Soll, Department of Biological Sciences, University of Iowa, 138 Biology Building, Iowa City, IA 52242-1324. The University of Iowa is an Equal Opportunity/Affinative Action Employer. Women and minorities are encouraged to apply.

#### POSTDOCTORAL/ASSOCIATE RESEARCH SCIENTIST POSITIONS MOLECULAR BASIS OF CANCER

Positions available to join research group cloning and characterizing novel genes mediating tumorigenesis, cancer progression and suppression, apoptosis, and cell differentiation. Training in molecular biology, emphasizing gene cloning, transgenic mice, protein analysis, and purification or protein-protein interactions. Send curriculum vitae and three references to: Dr. P. B. Fisher, Columbia University, College of Physicians and Surgeons, BB 15-1501, 630 West 168th Street, New York, NY 10032. FAX: 212-305-8177; e-mail: pbfl@columbia.edu. An Affinnative Action/Equal Opportunity Employer.

#### POSITIONS OPEN

#### FOUR MOLECULAR ONCOLOGY RESEARCH POSITIONS IN EXPERIMENTAL PATHOLOGY

A division of experimental pathology is being created to enhance translational research in the Pathology Department of the University of Tennessee Medical Center. Four (4) M.D. or M.D.-Ph.D. Pathologists who are Board-certified or Board-eligible in anatomic and/or clinical pathology are being recruited for tenure-track ASSISTANT/ASSOCIATE PRO-FESSOR appointments. Candidates with research interest in molecular oncology are encouraged to apply. Preference will be given to those candidates with interests in one of the following fields: (1) signal transduction in growth regulation/apoptosis/differentiation, (2) functional genomics, or (3) tumor angiogenesis and invasion. Candidates should have a strong publication record and the ability to attract extramural funding. In addition to a primary role in research and teaching, candidates will be expected to contribute to the clinical service responsibilities of the department. Interested applicants should submit a curriculum vitae, statement of research and clinical interests. and three letters of recommendation to: Dr. Lawrence Pfeffer, Co-Chair, Search Committee, Pro-fessor and Director of the Graduate Program in Pathology, The University of Tennessee, Memphis, Room 576-BMH Main, 899 Madison Avenue, Memphis, TN 38163. The University of Tennessee is an Equal Employment Opportunity/Affirmative Action/ Title VI/Title IX/Section 504/ADA/ADEA Employer.

Available immediately: several POSTDOC-TORAL OPENINGS in the Liver Study Unit, University of Nebraska Medical Center (UNMC) and the Omaha Veterans Administration Medical Center (OVAMC). The general area of interest is the determination of and mechanisms involved in toxic effects of alcohol on cellular systems, especially in the liver. Positions are through NIH and/or VA Merit Awards and funding is for a minimum of two to three years (initial one-year appointment); reappointments on a yearly basis). If interested send curriculum vitae to: Carol A. Casey, Ph.D. (alcohol and endocytosis) or Tom Jerrells, Ph.D. (alcohol and immunity to infectious agents and immunopathology) or Terrence M. Donohue, Ph.D. (alcohol and protein degradation) or Geoffrey Thiele, Ph.D. (immune responses to aldehyde-modified proteins), c/o Liver Study Unit, **Omaha Veterans Administration Medical Center** (151), 4101 Woolworth Avenue, Omaha, NE 68105. UNMC/OVAMC is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply. Not an H-1 or J-1 opportunity.

#### POSTDOCTORAL POSITION HARVARD MEDICAL SCHOOL

Position available to study signal transduction pathways and developmental mechanisms associated with genes responsible for human neurodegenerative discases. Projects focus on molecular mechanisms of neuronal apoptosis and the role of the presenilin genes in Notch and Wnt signaling. For reference see: *Nature* **395**:698, 1998; *JBC* **272**:14505, 1997; *Neuron* **16**:921, 1996; *Nature* **378**:776, 1995. Experience in molecular and cell biology is required. Send curriculum vitae, a brief description of research experience, and names of three references to: **Dr. Bruce Yankner, Children's Hospital, Enders 260, 300 Longwood Avenue, Boston, MA 02115. FAX: 617-738-1542**. Equal Opportunity Employer.

A POSTDOCTORAL POSITION in organic synthesis is available. Candidates with a Ph.D. degree either in synthetic organic or medicinal chemistry are solicited to join a research team to develop imaging agents for central nervous system dopamine and serotonin receptors, and amyloid aggregates in Alzheimer's disease. Major emphasis will be in organic and inorganic synthesis of novel compounds. Send résumé to: Dr. Hank F. Kung, Room 305, 37000 Market Street, Departments of Pharmacology and Radiology, University of Pennsylvania, Philadelphia, PA 19104. E-mail: kunghf@sunmac.spect.upenn. edu; website: http://sunmac.spect.upenn.edu/.



## Section Head, Urogenitals

#### Sandwich, Kent

Pfizer is a research based global health care company committed to the discovery and development of new medicines. The company employs 47,000 people world-wide, of whom about 3,500 are based in the UK. The Sandwich site contains 1,700 research and development staff, whose track record in the fight against disease makes them one of the best drug discovery teams in the world.

Recent product launches have established Pfizer's position as a leader in the Urogenitals field. Current activities include research to identify novel therapeutic targets for the treatment of incontinence and benign prostatic hyperplasia.

Pfizer now wishes to strengthen the team by recruiting an experienced scientist, ideally but not necessarily from a urogenitals background. Other smooth muscle experience



#### **Competitive Package**

could also be relevant. A good first degree and PhD in Biology or Pharmacology should ideally be followed by one or more post-docs and then a career in the pharmaceutical industry. Evidence of successful drug discovery, creativity, leadership and commercial awareness are all important characteristics, along with the ability to communicate widely and at a senior level.

Leading a team of around 12-15, the successful candidate will focus in particular on urology and will have the opportunity to inherit ongoing and initiate new projects in a climate of professionalism, urgency and the highest scientific standards.

Please send a full CV in confidence to GKR at the address below, quoting reference 99016J on both letter and envelope, and including details of current remuneration.

Queensberry House, 3 Old Burlington Street, London W1X 1LA. Tel: 0171 534 0097. Fax: 0171 534 0001. E-mail: kwilliams@gkrgroup.com

## The Queen's University of Belfast Post Doctoral Research Fellow

#### (Ref: 99/F362A)

#### School of Medicine Department of Clinical Medicine/Department of Haematology

This post, funded by the Northern Ireland Leukaemia Research Fund, is available initially for three years, with a possible extension for a further 2 years, to conduct research on the role of homeobox genes in haematopoiesis and leukaemogenesis.

Applicants must have at least a second class honours degree or equivalent in Biochemistry, Biology or a closely-related discipline together with a PhD obtained (or about to be obtained) in Biochemistry, Molecular Biology, Developmental Biology or a closely-related discipline. Candidates should also have at least three years' experience of molecular biological techniques, at least one year's experience in the study of gene expression and an appropriate publication record. Experience in tissue culture methods, homeobox gene research, undergraduate/postgraduate teaching, participation in successful grant applications and competence in the understanding and use of computers are desirable.

For further information contact Dr. Cliona McHale, Haematology Research Group, The Queen's University, Belfast Tel: (44) 01232 329241 ext. 2013; e-mail: c.mchale@qub.ac.uk

on age, qualifications and experience

£15,735 - £20,107 per annum starting salary dependent

Salary:

Closing Date: 7 May 1999.

It is intended that interviews will take place on 4 June 1999.

Applicants, quoting 99/F362A, may obtain further particulars from the Personnel Office, The Queen's University of Belfast, Northern Ireland, BT7 1NN, by telephoning (01232) 273044 or (01232) 273854 (answering machine) or Fax: (01232) 324944 or e-mail on personnel@qub.ac.uk.

Committed to an Equal Opportunities policy and selection on merit, the University welcomes applications from all sections of the community.

## UNIVERSITY COLLEGE LONDON Biochemical Engineering Lecturer in

## Biocatalyst Engineering

The Department of Biochemical Engineering wishes to appoint a new faculty member to further develop its activities in the molecular aspects of biocatalyst engineering. The successful candidate will be expected to demonstrate research leadership and collaborate closely with other staff members involved in the design of whole processes for the manufacture of complex pharmaceutical intermediates and recombinant secondary metabolites. Candidates should have demonstrated research experience in enzyme engineering, such as directed evolution, directed mutagenesis etc., and be interested in applying these towards real process outcomes.

The Department, the first in the UK and a founding laboratory of the field, is an international centre and part of one of the UK's top four research universities. A recent \$20M investment in new facilities, equipment and instruments and a long tradition of interdisciplinarity provides a powerful research and advanced training base. The Department teaches at the undergraduate, postgraduate and post-experience levels and takes great pride in producing both the world's future bioprocess leaders and advanced bioprocess engineering research.

Applications with a full CV should be sent to Professor Michael Hoare, Head of Department, The Department of Biochemical Engineering, University College London, Torrington Place, London WC1E 7JE, UK (Email: m.hoare@ucl.ac.uk).

Deadline for applications 1st July. Further information about the Department can be found on our web site (www.biochemeng.ucl.ac.uk).

Working Toward Equal Opportunity

#### POSITIONS OPEN

#### POSTDOCTORAL POSITIONS PROKARYOTE MOLECULAR GENETICS AND BIOCHEMISTRY

Archer Daniels Midland Co. (ADM), the world's largest agriprocessing company, has two immediate openings for Research Postdoctorates. Candidates should be self-starters having a record of successful problem solving in the fields of prokaryote molecular genetics or biochemistry. An understanding of microbial physiology would be relevant for both positions. The Molecular Geneticist will develop transformation systems, shuttle vectors, and gene expression systems for a novel industrial microorganism. Experience in protein purification and enzyme assay would be beneficial but is not crucial. The Biochemist will develop and apply strategies for analysis of metabolic pathways, most likely involving enzymology, protein purification, and measurement of intracellular metabolites.

ADM operates a modern, well-equipped research facility near its corporate headquarters in Decatur, Illinois.

Archer Daniels Midland offers a complete benefit package including pension, ESOP, health, dental, and life insurance.

Applications should submit their cover letter, a résumé, at least two references, and availability date to:

> Sheila Witts-Mannweiler Archer Daniels Midland Co. Director—Corpoate Personnel P.O. Box 1470 Decatur, IL 62525

ADM is an Equal Opportunity Employer.

The National Eye Institute, National Institutes of Health, has **POSTDOCTORAL POSITIONS** available for the study of cataract. Candidates should have background in molecular biology/biochemistry and must be U.S. citizens or permanent residents with less than five years of postdoctoral experience. Starting salary ranges from \$25,000 to \$38,000 per year depending upon experience. Paid health benefits and a generous travel allowance are included. One position is for the study of cataracts and gene expression using molecular biology approaches; the second will focus on signal transduction pathways in the normal and cataractous lens. For the first position send curriculum vitae, bibliography, and names of three references to: Dr. Deborah Carper, Laboratory of Mechanisms of Ocular Diseases, NIH, NEI, 6 Center Drive, MSC-2735, Bethesda, MD 20892-2735. Telephone: 301-496-2144; FAX: 301-496-1759; e-mail: debbie@helix.nih.gov. For the second position direct the same information to: Dr. Sam Zigler, Laboratory of Mechanisms of Ocular Diseases, NIH, NEI, 6 Center Drive, MSC-2735, Bethesda, MD 20892-2735. Telephone: 301-496-6669; FAX: 301-496-1759; e-mail: szigler@intra.nei. nih.gov.

NIH is an Equal Opportunity Employer.

## POSTDOCTORAL FELLOWSHIPS DIABETES/OBESITY RESEARCH

Applications are invited for two Postdoctoral positions available beginning on or about July 1, 1999. The projects are aimed at (1) identifying the cellular mechanisms of insulin resistance in diet-induced obesity, (2) defining the role of leptin in maintaining metabolic homeostasis, and (3) understanding the role of peripheral leptin receptors in determining whole-body leptin action. We are particularly interested in identifying individuals who are willing to apply or are currently applying the tools of gene therapy, molecular biology, or biochemistry to understanding the pathophysiology of diabetes/obesity. Further details of these positions are available upon application. Interested applicants should submit (preferably by FAX) their curriculum vitae, three letters of recommendation, and a short (less than one page) statement of research interests to: Robert M. O'Doherty, Ph.D., Division of Endocrinology and Metabolism, University of Pittsburgh, El140 Biomedical Science Tower, 200 Lothrop Street, Pittsburgh, PA 15261. FAX: 412-648-3290.

#### POSITIONS OPEN

#### THE UNIVERSITY OF VERMONT COLLEGE OF MEDICINE DEPARTMENT OF NEUROLOGY

Two positions are available immediately in the Department of Neurology at the University of Vermont College of Medicine. Support is provided for research on the mechanisms underlying changes in lower urinary tract function following chronic spinal cord injury or bladder inflammation. The roles of neurotrophic factors/cytokines following injury are investigated. (1) POSTDOCTORAL FELLÓWSHIP. Applicants should be trained in molecular neurobiology techniques with experience in the synthesis of riboprobes. Experience with RNase protection assays and publications involving *in situ* hybridization techniques are highly desired. (2) **RESEARCH ASSOCIATE**. Applicants should be trained in electrophysiological techniques with experience in whole-cell patch clamp recording. Studies will focus on determining electrical properties of urinary bladder afferent neurons following bladder dysfunction. Funding is available for each position for two years. Applicants must have strong motivation and excellent communication skills. Applicants should send a curriculum vitae and bibliography, names and addresses of three references to: Margaret A. Vizzard, Ph.D., University of Vermont, Department of Neurology, E219 Given, Burlington, VT 05405. Telephone: 802-656-3209; e-mail: mvizzard@zoo.uvm.edu. Affirmative Action/ Equal Opportunity Employer

#### POSTDOCTORAL RESEARCH ASSOCIATE PLANT/MICROBIAL PHYSIOLOGIST

The United States Department of Agriculture, Agricultural Research Service, Southern Regional Research Center, New Orleans, Louisiana, is accepting applications for a Plant/Microbial Physiology Post-doctoral position. Announcement No: RA-99-30H for a Plant/Microbial Physiologist or related disci-pline (salary range \$39,960 to \$47,891). The individual will conduct research on the role phosphorus containing compounds from agricultural runoff have on the development of Harmful Algal Blooms (HAB). Determine the effect phytic acid and inositol phosphates have on these ĤÁB. Candidates must have a knowledge of nutritional biochemistry as it relates to aquatic microbes, Ph.D. in plant physiology or related field. Specific questions regarding the position may be directed to: Dr. Edward J. Mullaney, Telephone: 504-286-4364. Qualification requirements listed on ARS website: http://www.ars.usda.gov. ARS is an Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately to study the role of the S. cerevisiae mismatch repair system in repair and recombination. The work will involve a variety of both genetic and molecular techniques to better understand how the mismatch repair system functions in repair, mutation avoidance, and in preventing recombination between nonidentical sequences. Applicants should have a strong background in molecular techniques. Previous experience with yeast is desired, but not essential. The laboratory is located at Emory University in Atlanta, Georgia Emory is a rapidly expanding and dynamic university with multiple resources in the biological and biomedical sciences. Please send curriculum vitae and names of three references to: Gray F. Crouse, Department of Biology, Emory University, Atlanta, GA 30322. E-mail: gcrouse@biology.emory.edu.

Emory University is an Affinnative Action/Equal Opportunity Employer.

#### NEUROPHYSIOLOGIST

**POSTDOCTORAL POSITION** is available immediately for a Neurophysiologist to study the role of mossy fiber synaptic reorganization in epilepsy with use of whole cell patch clamp recordings. Some experience with cellular electrophysiological techniques is highly desirable. Send a curriculum vitae and names of three references to: Dr. J. Victor Nadler, Department of Pharmacology and Cancer Biology, Box **3813**, Duke University Medical Center, Durham, NC 27710. E-mail: nadle002@acpub.duke.edu. Duke University is an Equal Opportunity/Affirmative Action Employer.

#### POSITIONS OPEN

**POSTDOCTORAL FELLOW POSITION.** The Department of Pharmaceutical Sciences invites applications for a Ph.D. to study G-protein-mediated signal transduction mechanisms in the pancreatic islets in relation to insulin secretion. Experience in cell biology and molecular biology techniques is preferred. Interested candidates should forward curriculum vitae and names of three references to: **Prof. Anjan Kowluru, Department of Pharmaceutical Sciences, College of Pharmacy and Allied Health Professions, 619 Shapero Hall, Detroit, MI 48201.** 

Wayne State University is an Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply. All buildings, structures, and vehicles at WSU are snoke-free. Wayne State University—people working together to provide quality service.

#### POSTDOCTORAL POSITIONS MACROMOLECULAR BIOPHYSICS

Two positions are available in a laboratory working on macromolecular biophysics, primarily using atomic force microscopy (AFM) website: hohlab.bs. jhmi.edu. We seek one individual with a physics or engineering background and one with a background in biochemistry, biophysics, or physical chemistry. Please send a curriculum vitae and names of three references to: Dr. Jan Hoh, Department of Physiology, Johns Hopkins School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205. Email: jhoh@jhmi.edu. Affiimative Action/Equal Opportunity Employer/Disabled/Veterans.

**POSTDOCTORAL POSITIONS** available for studies of nuclear receptors/coactivators/corepressors in cancer biology and embryonic development. Experimental systems include primary tumors, embryonic stem cell cultures, and transgenic mice. Ph.D. graduate training in molecular biology, biochemistry, or mouse embryology is desirable. Send curriculum vitae and names of three references to: Dr. Li-Na Wei, Department of Pharmacology, 3-249 Millard Hall, University of Minnesota, 435 Delaware Street S.E., Minneapolis, MN 55455. E-mail: weixx009@ maroon.tc.umn.edu; FAX: 612-625-8408. The University of Minnesota is an Equal Opportunity Educator and Employer.

#### POSTDOCTORAL POSITION

Available immediately for electrophysiology on cyclic nucleotide-activated channels. Our research is focused on understanding the structure-function relationship of these channels. Please send curriculum vitae, research statement, and three references to: Jacqueline Tanaka, 327 Levy Building, Department of Pathology, School of Dental Medicine, 4010 Locust Street, University of Pennsylvania, Philadelphia, PA 19104-6002. Website: http://athens. dental.upenn.cdu/tanaka.

#### POSTDOCTORAL FELLOW

Postdoctoral Fellow position is available at Harvard Medical School/Brigham and Women's Hospital to study the role of cysteine proteases in MHC class II antigen presentation and immunity. Experience in molecular biology and immunology preferred. Send curriculum vitae to: Dr. Harold Chapman, Pulmonary and Critical Care, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115. FAX: 617-732-7421. An Affinnative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS in molecular and cellular immunology immediately available to study mucosal cellular immunity, pathogenesis of IBD, and to develop vaccines against HIV and HPV. Cellular immunology background is required and molecular biology experience is also preferred. Interested candidates should send applications to: Dr. Liang Qiao, Department of Microbiology and Immunology, Loyola University Chicago (Medical-Center), 2160 South First Avenue, Maywood, IL 60153. E-mail: Iqiao@luc.edu; FAX: 1-708-216-1196.

#### VICE PRESIDENT FOR RESEARCH THE OHIO STATE UNIVERSITY

The Ohio State University invites nominations and applications for the position of Vice President for Research. The University seeks an individual with strong leadership skills who will develop and pursue innovative strategies to enhance both core discipline and interdisciplinary research activity as well as public-private partnerships. Candidates should have a record of outstanding achievement in research, demonstrated administrative ability, a commitment to education through research. and experience in grant and contract activities with governmental agencies, private foundations, and industry. Candidates should understand the role of university research in formulating national research strategies and appreciate the comprehensive scope and mission of a large, land grant institution. In addition to its 19 colleges which include more than 100 departments and schools, The Ohio State University is comprised of a Graduate School and one of the nation's largest and most comprehensive academic medical centers.

The University has begun development of a Science and Technology Campus, implementation of an aggressive new research plan, and elaboration of a strategic investment plan to raise the University to the highest rank of American research institutions. The OSU Research Foundation, responsible for sponsored program administration, reports to the Vice President for Research. The University's sponsored research exceeds \$200 million, with a steadily growing market share in the past few years. The Vice President for Research heads the Office of Research and administers its substantial discretionary funds to support research infrastructure, to provide seed funding for early career investigators, and to stimulate research in emerging interdisciplinary areas. The Vice President reports to the Executive Vice President and Provost and works closely with the Dean of the Graduate School and Deans of the various colleges to stimulate, facilitate, and enhance research and scholarship at the University. The Vice President for Research serves on the President's Planning Cabinet and is Vice Chair of the University Coordinating Council.

To assure full consideration, applications and nominations should be received by June 15, 1999. The Search Committee will begin screening dossiers on that date and will continue to review applications until the Vice President is selected.

Applications and nominations should be addressed to:

Terry A. Miller, Ohio Eminent Scholar, Professor of Chemistry Chair, Search Committee for Vice President for Research Office of Academic Affairs 203 Bricker Hall 190 North Oval Mall Columbus, OH 43210-1358

The Ohio State University is an Equal Opportunity, Affirmative Action Employer. Women, minorities, Vietnam-era veterans, disabled veterans, and individuals with disabilities are encouraged to apply.

For further information please visit our Web Sites: http://www.admin.ohio-state.edu/OAA/VPSearch/ Index.htm or http://www.osu.edu

# Deputy Director, National Centers for Coastal Ocean Science

(A Senior Executive Service Position in the Federal Government) Vacancy Announcement NOAA #99-02

Department of Commerce (DOC) National Oceanic and Atmospheric Administration (NOAA) National Ocean Service (NOS) National Centers for Coastal Ocean Science (NCCOS) Silver Spring, Maryland \$110,351 - 125,900 annually

The incumbent is responsible for the management of the National Centers for Coastal Ocean Science and must possess the following in order to qualify:

- 1. Broad background in oceanography, physical, chemical, biological, ecological, geodesy, cartography, and/or related environmental sciences with demonstrated experience in development of research programs/studies.
- 2. Experience in planning, organizing and coordinating research programs, with particular emphasis on science for resource and coastal management/operations. The scope of experience should demonstrate the scientific insight to recognize opportunities for advancing the science through development of state-of-the-art, and application of innovative uses of technologies.
- Broad experience in the direction of multi-disciplinary programs to manage Great Lakes, coastal and/or ocean resources, that demonstrates the analytical ability involved in administration of conservation management programs.
- Demonstrated ability to review critically complex regulations, legislation and related documents with respect to their scientific, technical, economic and/or policy implications.
- 5. Ability to perform senior level research and/or recognized professional standing in the scientific community, with particular emphasis on environmental sciences, as evidenced by publications, presentations, membership and/or offices held in professional societies.

Please contact Dede Epstein at 301/713-4477, x144 (301/713-0974[TDD] for an announcement package (Internet: address: dede.epstein@hrmo.noaa.gov), including mailing instructions—referring to the announcement number -OR- you may access the entire full-text vacancy from NOAA's Executive Resources Homepage (see below). Incomplete applications will be returned.

http://www.rdc.noaa.gov/~hrmo/er-home.htm

This vacancy will close on May 10, 1999.

NOAP

"NOAA Values a Diverse Workforce and is an Equal Opportunity Employer"



#### POSITIONS OPEN

PREDOCTORAL and POSTDOCTORAL PO-SITIONS on an NIH-funded Interdisciplinary Training Grant are available to individuals interested in intracellular signaling, gene transcription, mitogenesis, lipid metabolism, and several other biological processes involved in a variety of cardiovascular diseases. Candidates will have the opportunity to work in the laboratory of one of the 13 Preceptors in the Departments of Biochemistry, Medicine, Pharmacology, and Physiology and Biophysics. Visit our website: http://www.utmem.edu/pharmacology/training. html for each Preceptor's research interest. Applicants must be U.S. citizens or permanent residents. Postdoctoral candidates must have a M.D. and/or Ph.D. degree in one of the biological sciences. Send résumé with names of three references to: Dr. Tarun B. Patel, Department of Pharmacology, University of Tenressee, Memphis, 874 Union Avenue, Memphis, TN 38163. FAX: 901-448-7300. UT is an Equal Employment Opportunity/Affirmative Action/Title VI/Title IX/Section 504/ADA/ADEA Employer. Minorities and women are especially encouraged to apply.

POSTDOCTORAL POSITION to study the regulation and mechanism of action of GTPase-activating proteins (GAPs) for heterotrimeric G proteins, including RGS proteins and related effector enzymes. Potential projects include regulation of GAP activity, interactions of GAPs and  $G\alpha$  subunits with other signaling proteins, effects of GAPs on GDP/GTP ex-change, and mechanism of GAP activity. Candidates should have a Ph.D. degree and research experience in either biochemistry or molecular genetics relevant to this area. Please send curriculum vitae, brief statement of research background and interests, and names of two to three referees to: Elliott M. Ross, Department of Pharmacology, University of Texas Southwestern Medical Center, 5323 Harry Hines Bou-levard, Dallas, TX 75235-9041. E-mail: ross@ utsw.swmed.edu. University of Texas Southwestern is an Equal Opportunity Institution.

#### POSTDOCTORAL POSITION G PROTEIN SIGNALING

A Postdoctoral position is available immediately to study the regulation and actions of G proteins and G protein-coupled receptors in relation to gene expression. Projects will employ immunological and molecular biological techniques, including microinjection, cloning, site-directed mutagenesis, and DNA and protein expression analysis. A recent Ph.D. with training in basic molecular biological techniques is required. Please submit a curriculum vitae, including names and addresses of three references, to: Dr. David R. Manning, Department of Pharmacology, University of Pennsylvania School of Medicine, 3620 Hamilton Walk, Philadelphia, PA 19104-6084. E-mail: manning@pharm.med.upenn.edu.

POSTDOCTORAL POSITION available immediately to study the interaction of human papillomavirus proteins with cellular pathways mediating growth control. Experience in molecular/cellular biology with emphasis on signal transduction, cell cycle, or apoptotic pathways preferred. Send curriculum vitae, research experience, and three letters of reference to: Ann Roman, Ph.D., Medical Sciences Building Room 244, Department of Microbiology and Immunology, Indiana University School of Medicine, 635 Barnhill Drive, Indianapolis, IN 46202-5120. E-mail: aroman@iupui.edu; FAX: 317-274-4090.

A POSTDOCTORAL RESEARCH POSI-TION is available to investigate the natural toxininduced cell signaling alterations. Experience in cellular and molecular biology desirable. For more information see website: www.vet.uga.edu/vph/ or submit résumé with recent publications and arrange to submit three letters of reference by June 15, 1999, to: R. P. Sharma, Professor, College of Veterinary Medicine, The University of Georgia, Athens, GA 30602-7389.

#### POSITIONS OPEN

#### POSTDOCTORAL RESEARCH POSITION NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

The Laboratory of Molecular Microbiology seeks a Postdoctoral Fellow (M.D.-D.V.M. and/or Ph.D.) with a strong background in cell biology, molecular virology, or molecular pathology who has a particular interest in AIDS pathogenesis. Our laboratory utilizes simian immunodeficiency virus (SIV) infection of monkeys as a model for human AIDS for the development of vaccines and the study of pathogenesis. The focus of our pathogenesis studies are the delineation of viral and host factors responsible for variable disease outcome following SIV-infection with a particular interest in the study of the mechanisms for the lack of disease observed in SIV-infected natural host species. The successful candidate would study the dynamics of infection and immune responses in experimental SIVagm-infection of macaque monkeys (an AIDS model) and African green monkeys using a varicty of tissue culture techniques, viral load assays, immunohistochemistry, in situ hybridization, and cellular immunology. The applicant should have some prior experience in dealing with animal models as well as expertise in molecular retrovirology.

The position is available immediately for a duration of two to five years. Starting salary is dependent on qualifications.

Applicants are requested to submit a curriculum vitae and three letters of reference to: Dr. Vanessa Hirsch, Laboratory of Molecular Microbiology, NIAID Twinbrook II Facility, 12441 Parklawn Drive, Rockville, MD 20852 USA. Telephone: 301-496-2976.

NIH is an Equal Opportunity Employer.

#### POSTDOCTORAL FELLOWSHIPS JOHNS HOPKINS MEDICAL INSTITUTIONS

Postdoctoral positions are available for the study of the molecular mechanisms of Parkinson's disease and other neurodegenerative disorders. Molecular investigations include transgenic and gene-targeted mouse models, yeast 2-hybrid screening, free radicals, nitric oxide, *a*-synuclein, Parkin, PARP and PARG biology, and gene expression profiling.

For inquiries, please send curriculum vitae and three letters of reference to: Ted M. Dawson, M.D., Ph.D., Department of Neurology, Johns Hopkins University School of Medicine, 600 North Wolfe Street, Carnegie 214, Baltimore, MD 21287. Telephone: 410-614-3359; FAX: 410-614-9568; e-mail: aschmid@jhmi.edu.

JHMI is an Equal Opportunity/Affirmative Action Employer.

Two **POSTDOCTORAL POSITIONS** available immediately. The first position will study the mechanisms of sexual transmission of HIV. Emphasis is on the role of reproductive tract epithelia and cell trafficking in HIV transmission. Ph.D. in virology or related field required. The second position will work on developing a topical microbicide to protect people from infection by HIV and other sexually transmitted infections. Work for the second position will involve primarily synthesizing, purifying, and identifying sulfated polysaccharides. Ph.D. in chemistry or related field required. For either position, send curriculum vitae, names and addresses of three references, and letter of interest to: Dr. David Phillips, Population Council, 1230 York Avenue, Box 273, New York, NY 10021. Telephone: 212-327-8744; FAX: 212-327-7678; e-mail: dphillips@popcouncil.org.

**POSTDOCTORAL POSITION** to study genetic engineering of the mammary gland for mastitis resistance. Background in dairy science preferred with strengths in micro- and molecular biology. Send a description of research interests, curriculum vitae, and names of three references to: **Dr. D. E. Kerr, 210 Terrill Hall, Department of Animal Sciences, University of Vermont, Burlington, VT 05445. Email: dkerr@zoo.uwm.edu.** Equal Opportunity Employer.

#### POSITIONS OPEN U.S. DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE The USDA, ARS, National Animal Disease Center, Ames, Iowa is accepting applications for a full-time, **POSTDOCTORAL MICROBIOLOGIST** position in the Metabolic Diseases and Immunology Research Unit. The individual selected will investigate the metabolism of plant toxins and ecology of microorganisms in the digestive tract of ruminants as related to food safety and animal health. A Ph.D. is required and should have been awarded within the last four years. Knowledge of anaerobic microbiology, microbial physiology, molecular biology, or natural products chemistry is required. This Excepted Service appointment is for two years with a salary range of \$39,960 to \$51,946 per year and includes benefits. U.S. citizenship is required unless the candidate is a citizen of a country that has a defense treaty with the United States. Send a curriculum vitae and names of three references to: Dr. Mark Rasmussen, USDA, ARS, National Animal Disease Center, P.O. Box 70, Ames, IA 50010. Telephone: 515-663-7350; e-mail: mrasmuss@ nadc.ars.usda.gov. Applications will be accepted until position is filled. The USDA is an Equal Opportunity Provider and Employer.

Training Program in sleep, circadian, and respiratory neurobiology at Brigham and Women's Hospital/ Harvard Medical School. PREDOCTORAL and POSTDOCTORAL POSITIONS are available at Brigham and Women's Hospital/Harvard Medical School on a training grant sponsored by the NHLBI's National Center for Sleep Disorders Research. Request application and brochure from: Charles A. Czeisler, Ph.D., M.D., Program Director, Circadian, Neuroendocrine, and Sleep Disorders Sec-tion, Brigham and Women's Hospital, Harvard Medical School, 221 Longwood Avenue, Boston, MA 02115, Attn: Training Grant-YJG. E-mail: yjgilreath@gcrc.bwh.harvard.edu; FAX: 617-975-0809; Telephone: 617-732-5778. Application dead-lines arc October 15, 1999, February 15, 2000, April 15, 2000. Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply. Funding is limited to U.S. citizens or permanent residents.

#### POSTDOCTORAL POSITIONS NEW YORK UNIVERSITY MEDICAL CENTER Division of Immunology

Available immediately to join research group studying mechanisms of complement inhibition and the role of complement in inflammation and in tumoriniques required. Experience with recombinant antibody technology a plus. Send curriculum vitae and names of three referees to: Dr. Stephen Tomlinson, New York University School of Medicine, Department of Pathology, 550 First Avenue, New York, NY 10016. E-mail: tomlis01@popmail.med.nyu. edu.

**POSTDOCTORAL POSITIONS** in integrative research program to study cell signaling and mechanisms regulating myosin II phosphorylation and contraction of actin-based cytoskeleton. Projects involve aspects of cell biology, protein biochemistry, gene regulation, and knockout (conventional and conditional) mice. Send curriculum vitae and names of three references to: Dr. James Stull, Department of Physiology, Univerity of Texas Southwestern Medical Center, Dallas, TX 75235-9040. E-mail: jstull@ mednet.swmed.edu. Equal Opportunity Employer.

Great Lakes. POSTDOCTORAL POSITIONS available to study the function of newly cloned lipid kinase in insulin action (see: MCB 19:623, 1999; Biochemical J. 239:1999; Biochemistry 36:6564, 1997; EJCB 69:143, 1995; JBC 269:23865, 1994; MCB 14:3459, 1994; Endocrinology 134:507, 1994; JBC 268:6463, 1993). Respond to: Assia Shisheva, Ph.D., Department of Physiology, Wayne State University, Detroit, MI 48201. FAX: 313-577-5494; e-mail: ashishev@med.wayne.edu.

#### ASSISTANT DIRECTOR & SCIENTIFIC EDITORS SCIENTIFIC COMMUNICATIONS





## **Bayer:**

A premier healthcare company for the 21st century. In the highly competitive global pharmaceutical marketplace, there are many "Bayer Facts" that distinguish us as a leader. To name a few, we are part of Bayer Corporation, a \$32 billion international diversified organization and one of the most broadly-based healthcare companies in the U.S. Our Pharmaceutical Division has worldwide responsibility for the research and development of treatments for osteoporosis, cancer, diabetes, CNS antiinfectives, cardiovascular and other metabolic disorders. Currently we have the following opportunities available:

## ASSISTANT DIRECTOR

- You will be responsible for developing and implementing a scientific communication strategy for one or more drug products or therapeutic areas to achieve Bayer's U.S. and international marketing and sales objectives. You will communicate scientific and clinical data to the medical community by writing and supervising the creation of articles for the medical literature, presentations for national conferences and continuing education programs.
- A strong scientific/medical background, a PhD, MD or PharmD in a scientific/medical discipline, plus a minimum of five years experience in a related scientific/medical/pharmaceutical area required A minimum of four years of experience must include medical writing. Demonstrated ability to interpret and present scientific and clinical trial data, and excellent editorial and interpersonal skills essential. Must be independent, creative, innovative and able to juggle a variety of projects. Must also be a self-starter and able to maintain a high level of productivity with minimal supervision. Ability to supervise consultants and motivate individuals.

#### SCIENTIFIC EDITORS

- You will support the Associate and Assistant Directors by writing and editing scientific articles, poster and slide presentations for national conferences, and continuing education programs. You will perform literature searches, track project development, revise publications based on critical review, be responsible for compliance with criteria for creating continuing education programs for physicians and pharmacists, and interface with medical publishers and opinion leaders.
- Requires a strong scientific background, a PhD or PharmD in a scientific/medical discipline, plus a minimum of three years experience in a related scientific/medical/pharmaceutical area, at least two of which must include medical publishing or a Masters degree plus a minimum of five years experience in a related scientific/medical/pharmaceutical area, at least two years in medical publishing or equivalent education and experience. Requires an excellent ability to interpret scientific and clinical trial data, strong scientific writing ability, editorial skills, and excellent interpersonal skills. Must be independent, creative and able to handle a variety of projects simultaneously.
- Please SEND/FAX your resume including salary history to: Bayer Corporation, Pharmaceutical Division, Dept. DM-C28-AB, 400 Morgan Lane, West Haven, CT 06516. FAX: (203) 812-6798. No agencies or phone calls please. For more information on Bayer, search: http://www.bayerpharmana.com
- An Equal Opportunity Employer M/F/D/V. Bayer Corp. is committed to enhancing and maintaining cultural diversity within our work environment.
- We appreciate your interest in our Company. Unfortunately, we will only be able to respond to those individuals chosen for interviews or additonal follow-up.



Pharmaceutical Division

Changing the world with great care.

egeneron Pharmaceuticals, Inc. is on the forefront of cutting edge science and technology leading to novel potential therapeutics in areas such as neurological disorders, oncology, inflammation, angiogenesis, bone disorders, and muscular diseases. Our substantial and continued growth is enhanced by the presence on our

staff of interna- Turning tionally recognized scientists and significant collaborations with other presti-



gious pharmaceutical corporations. At Regeneron, we believe if you

provide outstanding people with the resources they need and a creative, energetic environment, they will achieve breakthroughs that will benefit the world. Exciting opportunities are available in the following areas:

#### **Research Associates** in Formulation and Stability

Participate in the development of stable formulations, execution of stability studies, and development of analytical methods. A BS/MS degree in pharmaceutics, biochemistry, chemistry or biology and one or more years of relevant laboratory experience in formulation and analytical method development, particularly using HPLC and electrophoresis, are required. **Respond to Job Code: DD666** 

#### **Research Associates in** Pharmacokinetics

Participate in conducting preclinical PK and ADME studies, in support of development of compounds as potential therapeutics, Applicants must possess a BS/MS degree in toxicology, biochemistry, pharmacology, biology or related sciences. Experience in any one or more of these techniques: HPLC, ELISA, RIA, and Gel - Electrophoresis techniques is required. Knowledge in in-vivo techniques, including dosing (IV, IM, SC, PO) and PK analyses is desirable. Respond to Job Code: REN 222

#### **Research Associate in** Immunoassay Development

Participate in development and validation of immunoassays and cell based assays. This position requires a BS/MS degree with two or more years of experience in development, optimization and validation of immunoassays and cell based assays in a biotech, pharmaceutical or clinical lab environment. Writing standard operating procedures and ability to organize and perform immunoassays on samples from clinical trials are required. Respond to Job Code: MUR 444

## Scientist in Pharmacology

Participate in the development of in-vivo models of disease, set up analytical assays, and evaluation of drug candidates. Experience in in-vivo work and training in biochemical and analytical assay development (ELISA, RIA, HPLC, electrophoresis) are required. Applicant should have a Ph.D. degree with at least two years post-doctoral training in relevant fields, especially obesity, diabetes, asthma, and inflammation. Respond to Job Code: VW / SCI 4/16

Regeneron is located on a campus-like corporate park and offers an outstanding benefits package including relocation, medical, dental, vision, Rx, stock options, 401(k) plan with match, long term disability, life insurance and paid holidays, vacation and personal days. Please visit our website at www.regeneron.com for more information. For consideration, please submit a cover letter indicating position of interest, along with a resume and salary requirements to:

**REGENERON** Pharmaceuticals, Inc. Human Resources, (specify Job Code) 777 Old Saw Mill River Road, Tarrytown, NY 10591 Fax: (914) 345-7790 • e-mail: jobs3@regpha.com EOE WF/D/V

Regeneron...we thrive on unique challenges. You'll thrive with us.

#### POSITIONS OPEN

#### RESEARCH POSITIONS CENTER FOR NEUROVIROLOGY AND NEUROONCOLOGY

Several **POSTDOCTORAL POSITIONS** are immediately available for candidates with an interest in studying (1) the molecular biology and pathogenesis of HIV-1 in brain, and molecular therapeutic strategies toward neurological diseases in AIDS; and (2) gene expression in brain with an emphasis on demyelinating diseases, and the development of gene and cellular therapeutic approaches toward treatment of demyelinating diseases. A Ph.D. or comparable professional degree with experience in cellular and molecular biology is required. Please send curriculum vitae, summary of research interests, and the names of three references to:

Kamel Khalili, Ph.D. c/o Dottie Bathe, Administrative Assistant Center for NeuroVirology and NeuroOncology Broad and Vine Streets, MS #406 Philadelphia, PA 19102-1192 E-mail: dorothy.bathe@drexel.edu

#### POSTDOCTORAL POSITION NEUROBIOLOGY OF INSECT LOCOMOTION/ROBOTICS

A unique opportunity for a Neurobiologist or Engineer with an interest in neuroscience. Our project is studying sensory feedback in insect walking to provide data for the construction and control of autonomous legged robots. The current phase of the project utilizes high-speed 3-D video imaging to record the kinematics of leg movement while extracellular recordings are taken from sensory nerves/muscles in freely walking insects. The position is available immediately. Please send a letter of interest, curriculum vitae, e-mail address, and the names of three references to: Dr. Sasha Zill, Department of Anatomy, Cell and Neurobiology, Marshall University School of Medicine, 1542 Spring Valley Drive, Huntington, 25704. Telephone: 304-696-7384; FAX: wv 304-696-7290; e-mail: sensillum@aol.com. Women and minorities are strongly encouraged to apply.

POSTDOCTORAL POSITION. Autoimmunity/neuroimmunology. Johns Hopkins University. Funded Postdoctoral position for three years to study exciting new strategies of antigen-specific immunotherapy for model autoimmune diseases. Projects involve specific therapy of experimental myasthenia gravis in animals and cell culture systems, using gene transfer, transgenic mice, stem cell-based therapy, and novel therapeutic agents. Strong background in immunology and molecular biology, and experience in cellular and antibody methods required. Funding for U.S. citizens or permanent residents. Curriculum vitae and list of references (e-mail preferred) to: Daniel B. Drachman, M.D., Prof. of Neurology and Neuro-science, Johns Hopkins School of Medicine, 600 North Wolfe Street, Baltimore, MD 21287-7519, Meyer 5-119. E-mail: dandrac@aol.com; FAX: 410-955-1961

Equal Opportunity/Affirmative Action Employer

**POSTDOCTORAL POSITIONS** are available to study the differentiation of human and nonhuman primate embryonic stem (ES) cells. Projects include identifying genes regulating self-renewal and embryonic pluripotency of ES cells; elucidating the mechanisms that control ES cell differentiation to specific early lineages; and reprogramming somatic cell nuclei to a pluripotent state. We seek highly motivated individuals with a strong background in molecular biology and enthusiasm for developmental biology. Please send a curriculum vitae, three references, and an introductory letter containing a brief description of research and career interests to: James Thomson, 1220 Capitol Court, The University of Wisconsin, Madison, WI 53715. FAX: 608-262-3524. The University of Wisconsin is an Equal Opportunity Employer. Women and minorities are encouraged to apply.

#### POSITIONS OPEN

**POSTDOCTORAL RESEARCH ASSOCI-ATE.** Bacterial pathogenesis. National Food Safety and Toxicology Center (FSTC), Michigan State University.

The primary focus of the position is the food-borne pathogen Campylobacter jejuni and involves three major thrust areas. (1) Identification and analysis of bacterial virulence genes. (2) Analysis of pathogen interaction with host cells using in vitro and in vivo systems. (3) Development of rapid assays for pathogen identification and methods to detect and measure antibiotic resistance. A Ph.D. or equivalent degree in microbiology, bacteriology, molecular biology, biochemistry, veterinary medicine, or human medicine and welldeveloped skills in classical and molecular genetics of prokaryotic microorganisms are essential. Salary is commensurate with NIH guidelines for Postdoctoral Research Associate position. Competitive benefits package. The incumbent will interact with an interdepartmental group consisting of five MSU faculty members and several graduate students in the FSTC. which is a research unit of several basic and applied science Departments on campus including Microbiology, Pharmacology, Epidemiology, and Food Science and Human Nutrition. The building houses faculty offices, well-equipped research laboratories, library, and accommodation for laboratory animals. More in-formation about the FSTC can be found at **website**: http://www.msu.nfstc. The application deadline is May 15, 1999, or until position is filled. A letter of application, a curriculum vitae, at least three letters of reference, and representative publications should be sent to: John Linz, Department of Food Science and Human Nutrition, Food Safety and Toxicology Center, 234B GM Trout Food Science Building, Michigan State University, East Lansing, MI 48824. Telephone: 517-353-9624; FAX: 517-353-8963; e-mail: jlinz@pilot.msu.edu.

MSU is an Affirmative Action/Equal Opportunity Institution. Persons with disability have the right to request and receive reasonable accommodation.

POSTDOCTORAL POSITIONS. Positions are available to study (1) the mechanisms of Alzheimer's disease  $\beta$ -amyloid precursor protein trafficking and proteolytic processing or (2) the functions of Rab GTPases in mammalian cells. For additional information see website: http://www.collmed.psu.edu/ weis/faculty/maltese.htm. Requirements include a recent Ph.D., experience in cell and/or molecular biology, and excellent communication skills. To apply, please send a curriculum vitae and the names and addresses of three references to: William A. Maltese, Ph.D., c/o Barbara A. Brown, Weis Center for Research, Penn State College of Medicine, 100 North Academy Avenue, Danville, PA 17822-2601. Affinnative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE available July 1, 1999. Applicant must have Ph.D. or M.D. to study the molecular mechanisms of allergy (IgE regulation, II-4-dependent isotype switching). Qualified candidates should send curriculum vitae, statement of research interests, and three letters of recommendation to: Donata Vercelli, M.D., Respiratory Sciences Center, P.O. Box 245030, Tucson, AZ 85724. E-mail: dvercelli@resp-sci.arizona.edu.

The University of Arizona is an Equal Employment Opportunity/Affirmative Action/Minorities/Women/Disabled/ Veterans.

**POSTDOCTORAL POSITIONS** available immediately to study the folding pathway, membrane interactions, and fibrillogenesis of recombinant priou proteins. Strong background in protein chemistry, biophysical/spectroscopic methods, and/or molecular biology (DNA manipulation, site-directed mutagenesis, expression of recombinant proteins) required. Send curriculum vitae to: W. K. Surewicz, Ph.D., Department of Pathology, Case Western Reserve University, 2085 Adelbert Road, Cleveland, OH 44106. E-mail: wks3@pop.cwru.edu. *Affirmative Action/Equal Opportunity Employer.* 

#### POSITIONS OPEN

**POSTDOCTORAL POSITION** available to study drug and protein delivery systems for treating retinal disease. Experience in polymer synthesis preferred. Please send curriculum vitae, names of three references, and a recent publication to: W. Mark Saltzman, Professor, School of Chemical Engineering, Cornell University, 120 Olin Hall, Ithaca, NY 14853. E-mail: saltzman@cheme. cornell.edu.





STAFF SCIENTISTS NATIONAL UNIVERSITY MEDICAL INSTITUTES Faculty of Medicine National University of Singapore

National University Medical Institutes (NUMI) seeks to recruit experienced Staff Scientists at PRIN CIPAL INVESTIGATOR level to strengthen its research programs in any one of the following areas: molecular medicine, cardiovascular, and oncology research. Successful applicants should have a proven track record of independent research and be strongly driven to succeed in competitive research funding. The Staff Scientist recruited for the Molecular Medicine Laboratories will have responsibility for oversight of the oligonucleotide synthesis service and the opportunity to develop his/her own program in biomedical research. Salary and benefits will be commensurate with qualifications and experience. Details of NUMI's operations, research staff, and programs may be viewed at website: http://numi/crc.nus.edu. sg. Interested applicants should submit a statement of research interests, curriculum vitae, list of publications, and the names of three referees to: The Director, National University Medical Institutes, Block MD11 #02-01, Clinical Research Centre, Faculty of Medicine, National University of Singapore, 10 Kent Ridge Crescent, Singapore 119260 Republic of Singapore.

Only shortlisted applicants will be notified.

#### SYMPOSIUM

INTERNATIONAL SYMPOSIUM ON ANIMAL AND ZOONOTIC DISEASES Lessons Learned and Strategies for Meeting Current and Future Threats at Monona Terrace, Madison, Wisconsin June 20–23, 1999

For more information on program and registration, website: http://www.vetmed.wisc.edu/pbs/ courses/zoonotic.html. Or contact: Dr. Yoshihiro Kawaoka, e-mail: kawaokay@svm.vetmed.wisc.edu.

#### EUROPEAN OPPORTUNITIES

#### MOLECULAR BIOLOGY

The Department of Medicine (Cardiology) at University of Freiburg, Germany invites applications for a **PROJECT MANAGER** in molecular biology applied to the cardiovascular system. We seek a Scientist with research interests and experience in transgenic animal models and adenovirus gene transfer. Please send curriculum vitae and statement of research interests to: Dr. Manfred Zehender, Innere Medizin III, Hugstetterstrasse 55, Freiburg D-79106 Germany. FAX: D 761-270-3772; e-mail: zehender@mm31.ukl.uni-freiburg.de and Dr. Gideon Koren, Cardiovascular Division, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115 USA. FAX: US 617-734-5132; e-mail: koren@calvin.bwh.harvard.edu.

#### National Eye Institute National Institutes of Health

The Clinical Immunology Section, Laboratory of Immunology, has an opening for a Staff Scientist. This is a renewable position with a five year term. Candidates will be self-motivated individuals with an expertise in cellular and molecular immunological techniques using primary human cells and tissues. The successful candidate will be part of a highly interactive group of scientists and clinicians engaged in basic research and clinical trials aimed at developing novel immunotherapies for autoimmune diseases. Candidates must have a doctoral degree or equivalent training and be U.S. Citizens or resident aliens. Salary (base = \$58,027) is commensurate with gualifications and is accompanied with full benefits. Applicants should send their curriculum vitae, bibliography, and three letters of recommendation to:

> Jack A. Ragheb, M.D., Ph.D. Laboratory of Immunology/NEI/NIH Bldg.10, Rm.10N112A 10 Center Dr. MSC-1857 Bethesda, Maryland 20892-1857 (e-mail) jr50b@nih.gov

Deadline for receipt of applications is 5/31/99.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

#### STAFF SCIENTIST POSITION

Ophthalmic Genetics and Clinical Services Branch, National Eye Institute, National Institutes of Health, Bethesda, Maryland. Position available for Ph.D. with experience in protein crystallography, site-directed mutagenesis, protein expression and purification of  $\beta\gamma$ -crystallins, theoretical analysis of beta-structural proteins and structural interpretation of gel-filtration, and analytical centrifugation data. Knowledge of the UNIX operating system, programming languages, molecular modeling software and protein databases is essential for this position. Applicants must have at least 3 years of experience in molecular biology of <sub>βγ</sub>-crystallins. Salary based on education and experience beginning at \$58,000 for qualified applicants. All applications should include the following: a statement of research interest; a career synopsis, a current curriculum vitae and bibliography, and the names and addresses of references. A list of the requirements or additional information about the position may be obtained by contacting Ms. Cheryl Wild, Personnel Management Specialist, National Eye Institute, Building 31, Room 6A-18, Bethesda, Maryland 20892, telephone 301-496-4274; FAX 301-496-3958, e-mail: CWild@nei.nih.gov

Applications must be received or postmarked by June 30, 1999. Incomplete applications will not be considered.

Candidates must be either U.S. Citizens or Resident aliens who have a Ph.D. degree.

Selection for this position will be based solely on merit, with no discrimination for non-merit reasons such as race, color, religion, gender, national origin, political affiliation, marital status, disability, age, sexual orientation, or membership or non-membership in an employee organization.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

## Post-Doctoral Research Opportunities

Mount Sinai School of Medicine is a leader in medical research and education. We have the following research opportunities available:



## Post-Doctoral Fellows Research Associates

A dynamic laboratory is seeking selfmotivated and creative M.D. and/or Ph.D. fellows with demonstrated expertise in

glucose regulation and metabolic control to participate in an exciting research program in the development of genetic medicines for diabetes and/or obesity. Reply, with updated C.V., bibliography and 3 letters of recommendation to: **Dr. Savio L.C. Woo, Professor and Director, Box 1496, Institute for Gene Therapy and Molecular Medicine; Fax: 212-849-2572.** 

## **Post-Doctoral Fellows**

Positions are immediately available to study the functions and regulations of BRCA1, BRCA2, p53 and STAT proteins. Studies will be directed toward characterizing cellular targets and regulators of these proteins in vitro and in vivo as well as developing and exploiting novel functional assays. Training in molecular biology and biochemistry is required. Candidates should be experienced in protein purification/characterization, site-directed mutagenesis and cell cycle control. Reply, with C.V. and 3 letters of recommendation, to: **Toru Ouchi, Ph.D., Assistant Professor, Box 1130, The Derald H. Ruttenberg Cancer Center; Fax: 212-987-2240. E-mail: touchi@smtplink.mssm.edu** 

## **Post-Doctoral Fellow**

A position is available immediately for a Ph.D. or M.D. to study the development and regulation of epithelial cation and anion channels in mammalian renal epithelial cells using patch clamp techniques. Experience and skill in cellular electrophysiology, preferably patch clamping is required. Calcium imaging and molecular biology facilities are available. See Am. J. Physiol. 270:F391-F397, 1996 and 272:F397-F404, 1997 for recent articles. Reply, with C.V. and 3 references to: Dr. Lisa. M. Satlin, Chief, Division of Pediatric Nephrology, Departments of Pediatrics and Medicine, Box 1664. Fax: 212-426-1972. E-mail: lisa\_satlin@smtplink.mssm.edu

We offer a salary commensurate with experience and excellent benefits. For consideration, please follow "Reply to" information for your position of interest, to: **Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574.** We are an equal opportunity employer fostering diversity in the workplace.

#### Mount Sinai School of Medicine

#### EUROPEAN OPPORTUNITIES

#### ASSOCIATE PROFESSOR IN CARDIOVASCULAR PHYSIOLOGY University of Fribourg / Switzerland

The Institute of Physiology, University of Fribourg, Switzerland, invites applications for a tenure-track position at the Associate Professor level (available January 1, 2000). The candidate will carry out competitive research in cardiovascular physiology, in a field that reinforces existing research strengths, and must be able to attract external funding. He or she will assume teaching duties in German and/or French to preclinical medical and science students. Applications (with curriculum vitae, a list of publications with copies of the five most important papers, a two-page summary of projected research interests, and the names of three referees) should be sent before June 15, 1999, to: The Dean of the Faculty of Science, University of Fribourg, Chemin du Musée 6A, Fribourg CH-1700 Switzerland. Further information can be obtained from: The Institute's Director, e-mail: jean-pierre.montani@unifr.ch; website: http:// www.unifr.ch/inph/.







16 APRIL 1999 VOL 284 SCIENCE www.sciencemag.org



Operon Technologies is pleased to offer a cornucopia of modifications available with our custom oligonucleotides. For applications that require fluorescent labels, we offer many dyes, including HEX, TET, 6-FAM, TAMRA, ROX, Cy3, Cy5, Oregon Green<sup>®</sup>, and Texas Red<sup>®</sup>. We offer phosphorothioates, propyne derivatives, and 2'-O-Methyl RNA residues which can be used to modify oligos for antisense studies. All commonly modified bases such as deoxyinosine, deoxyuridine, and deoxynebularine, as well as many halogenated bases including 5-bromodeoxyuridine and 5-iododeoxycytidine arc available. We also offer a wide variety of modifications with aminolinkers, biotin labels, and special attachments such as digoxigenin. For a more complete list of possible modifications, please call our customer service department at 800-688-2248 and ask for our catalog.

<b>Custom DNA Synthesis Prices</b>		Purification Options		Sequence Modifications				
Scale	Price/base	Set-up	Method	Price	Modification	Price	Modification	Price
0.05 µmole	\$0.60	\$5.00	Sephadex	free	Amino Modifier Biotin	\$25 \$50	HEX, TET, 6-FAM Phosphate	\$70 \$25
0.2 µmole	\$1.20	\$10.00	HPLC	from \$30	Cy3	\$70	Oregon Green*	\$125
1.0 µmole	\$2.40	\$20.00	PAGE	from \$45	Cy5 Digoxigenin	\$70 \$125	ROX TAMRA	\$125 \$125
(Larger scales available)		(Many scales available)		Fluorescein	\$50	Texas Red®	\$125	



World's Leading Supplier of Synthetic DNA

1000 Atlantic Avenue, Suite 108 • Alameda, CA 94501 Phone: 800-688-2248 • Fax: 510-865-5255 • E-mail: dna@operon.com • Web: http://www.operon.com

Oregon Green® and Texas Red® are registered tademarks owned by Molecular Probes, Inc.

Circle No. 23 on Readers' Service Card

# Custom Genotyping of Model Organisms



Recognizing the contribution that the studies involving model organisms provide to our understanding of physiology and disease processes, Research Genetics is proud to offer genotyping of model organisms.

Genotyping of any marker which we offer as one of our MAPPAIRS<sup>TM</sup> is included in the standard fee. Markers are labeled using a kinase reaction with <sup>32</sup>P, PCR<sup>†</sup> products are run on polyacrylamide gels and x-ray film is exposed for each gel. Final data is provided in two forms: the autoradiograph for

each marker on each individual and as a data file in a ready-for-analysis format. All data are confidential.

Custom genotyping of small to large projects is available. Costs for custom genotyping vary widely from project to project. The range of costs is from \$5.00 to \$14.00 depending on the size of the project. Prices are expressed as per sample per genotype. Minimum charges apply.

We request that you schedule your project at your earliest convenience. Estimation of completion times are dependent upon the size of your project and projected start date. Contact Donna Brown (donna@resgen.com) for additional information regarding any aspect of our custom genotyping service or to discuss your project requirements.

The use of microsatellite markers for genetic analysis is covered by U.S. and foreign patents. The exclusive right to manufacture and sell these markers has been licensed to Research Genetics, Inc.

TM MAPPAIRS is a trademark of Research Genetics

<sup>†</sup>The Polymerase Chain Reaction (PCR) process is covered by patents owned by Roche Molecular Systems, Inc. and F. Hoffman-La Roche Ltd. Use of the PCR process requires a license. A license for research use may be obtained by purchase and use of authorized reagents and authorized thermocyclers, or by otherwise negotiating a research license with Perkin-Elmer.

Research Genetics Accelerating Discovery 2130 Memorial Pkwy, SW • Huntsville, AL • 35801 U.S. or Canada 800-533-4363 U.K. 0-800-89-1393 Http://www.resgen.com

Circle No. 27 on Readers' Service Card